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<211> 799

<212> DNA

<213> homo sapiens

<400> 34

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<211> 2050

<212> DNA

<213> homo sapiens

<400> 35

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<210> 36

<211> 1537

<212> DNA

<213> homo sapiens

<400> 36

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<211> 777

<212> DNA

<213> homo sapiens

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<211> 6322

<212> DNA

<213> homo sapiens

<400> 39

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<211> 1898

<212> DNA

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<213> homo sapiens

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<210> 66

<211> 204
 <212> PRT
 <213> homo sapiens
 <400> 66

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Met Gly Ala Pro Leu Ala Val Ala Leu Gly Ala Leu His Tyr Leu Ala
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Leu Phe Leu Gln Leu Gly Gly Ala Thr Arg Pro Ala Gly His Ala Pro
20      25      30
Trp Asp Asn His Val Ser Gly His Ala Leu Phe Thr Glu Thr Pro His
35      40      45
Asp Met Thr Ala Arg Thr Gly Glu Asp Val Glu Met Ala Cys Ser Phe
50      55      60
Arg Gly Ser Gly Ser Pro Ser Tyr Ser Leu Glu Ile Gln Trp Trp Tyr
65      70      75      80
Val Arg Ser His Arg Asp Trp Thr Asp Lys Gln Ala Trp Ala Ser Asn
85      90      95
Gln Leu Lys Ala Ser Gln Gln Glu Asp Ala Gly Lys Glu Ala Thr Lys
100     105     110
Ile Ser Val Val Lys Val Val Gly Ser Asn Ile Ser His Lys Leu Arg
115     120     125
Leu Ser Arg Val Lys Pro Thr Asp Glu Gly Thr Tyr Glu Cys Arg Val
130     135     140
Ile Asp Phe Ser Asp Gly Lys Ala Arg His His Lys Val Lys Ala Tyr
145     150     155     160
Leu Arg Val Gln Pro Gly Glu Asn Ser Val Leu His Leu Pro Glu Ala
165     170     175
Pro Pro Ala Ala Pro Ala Pro Pro Pro Lys Pro Gly Lys Glu Leu
180     185     190
Arg Lys Arg Ser Val Asp Gln Glu Ala Cys Ser Leu
195     200

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<210> 67
 <211> 193
 <212> PRT
 <213> homo sapiens
 <400> 67

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Met Asp Gly Gly Thr Leu Pro Arg Ser Ala Pro Pro Ala Pro Pro Val
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Pro Val Gly Cys Ala Ala Arg Arg Arg Pro Ala Ser Pro Glu Leu Leu
20      25      30
Arg Cys Ser Arg Arg Arg Arg Pro Ala Thr Ala Glu Thr Gly Gly Gly
35      40      45
Ala Ala Ala Val Ala Arg Arg Asn Glu Arg Glu Arg Asn Arg Val Lys
50      55      60
Leu Val Asn Leu Gly Phe Gln Ala Leu Arg Gln His Val Pro His Gly
65      70      75      80
Gly Ala Ser Lys Lys Leu Ser Lys Val Glu Thr Leu Arg Ser Ala Val
85      90      95
Glu Tyr Ile Arg Ala Leu Gln Arg Leu Leu Ala Glu His Asp Ala Val
100     105     110
Arg Asn Ala Leu Ala Gly Gly Leu Arg Pro Gln Ala Val Arg Pro Ser
115     120     125
Ala Pro Arg Gly Pro Pro Gly Thr Thr Pro Val Ala Ala Ser Pro Ser
130     135     140
Arg Ala Ser Ser Ser Pro Gly Arg Gly Gly Ser Ser Glu Pro Gly Ser
145     150     155     160
Pro Arg Ser Ala Tyr Ser Ser Asp Asp Ser Gly Cys Glu Gly Ala Leu
165     170     175
Ser Pro Ala Glu Arg Glu Leu Leu Asp Phe Ser Ser Trp Leu Gly Gly
180     185     190
Tyr

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<210> 68
 <211> 354
 <212> PRT

<213> homo sapiens

<400> 68

Met Arg Arg Leu Met Ser Ser Arg Asp Trp Pro Arg Thr Arg Thr Gly
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Thr Gly Ile Leu Ser Ser Gln Pro Glu Glu Asn Pro Tyr Trp Trp Asn
20 25 30
Ala Asn Met Val Phe Ile Pro Tyr Cys Ser Ser Asp Val Trp Ser Gly
35 40 45
Ala Ser Ser Lys Ser Glu Lys Asn Glu Tyr Ala Phe Met Gly Ala Leu
50 55 60
Ile Ile Gln Glu Val Val Arg Glu Leu Leu Gly Arg Gly Leu Ser Gly
65 70 75 80
Ala Lys Val Leu Leu Leu Ala Gly Ser Ser Ala Gly Gly Thr Gly Val
85 90 95
Leu Leu Asn Val Asp Arg Val Ala Glu Gln Leu Glu Lys Leu Gly Tyr
100 105 110
Pro Ala Ile Gln Val Arg Gly Leu Ala Asp Ser Gly Trp Phe Leu Asp
115 120 125
Asn Lys Gln Tyr Arg His Thr Asp Cys Val Asp Thr Ile Thr Cys Ala
130 135 140
Pro Thr Glu Ala Ile Arg Arg Gly Ile Arg Tyr Trp Asn Gly Val Val
145 150 155 160
Pro Glu Arg Cys Arg Arg Gln Phe Gln Glu Gly Glu Glu Trp Asn Cys
165 170 175
Phe Phe Gly Tyr Lys Val Tyr Pro Thr Leu Arg Cys Pro Val Phe Val
180 185 190
Val Gln Trp Leu Phe Asp Glu Ala Gln Leu Thr Val Asp Asn Val His
195 200 205
Leu Thr Gly Gln Pro Val Gln Glu Gly Leu Arg Leu Tyr Ile Gln Asn
210 215 220
Leu Gly Arg Glu Leu Arg His Thr Leu Lys Asp Val Pro Ala Ser Phe
225 230 235 240
Ala Pro Ala Cys Leu Ser His Glu Ile Ile Ile Arg Ser His Trp Thr
245 250 255
Asp Val Gln Val Lys Gly Thr Ser Leu Pro Arg Ala Leu His Cys Trp
260 265 270
Asp Arg Ser Leu His Asp Ser His Lys Ala Ser Lys Thr Pro Leu Lys
275 280 285
Gly Cys Pro Val His Leu Val Asp Ser Cys Pro Trp Pro His Cys Asn
290 295 300
Pro Ser Cys Pro Thr Val Arg Asp Gln Phe Thr Gly Gln Glu Met Asn
305 310 315 320
Val Ala Gln Phe Leu Met His Met Gly Phe Asp Met Gln Thr Val Ala
325 330 335
Gln Pro Gln Gly Leu Glu Pro Ser Glu Leu Leu Gly Met Leu Ser Asn
340 345 350
Gly Ser

<210> 69

<211> 362

<212> PRT

<213> homo sapiens

<400> 69

Met Ala Phe Leu Pro Ser Trp Val Cys Val Leu Val Gly Ser Phe Ser
1 5 10 15
Ala Ser Leu Ala Gly Thr Ser Asn Leu Ser Glu Thr Glu Pro Pro Leu
20 25 30
Trp Lys Glu Ser Pro Gly Gln Leu Ser Asp Tyr Arg Val Glu Asn Ser
35 40 45
Met Tyr Ile Ile Asn Pro Trp Val Tyr Leu Glu Arg Met Gly Met Tyr
50 55 60
Lys Ile Ile Leu Asn Gln Thr Ala Arg Tyr Phe Ala Lys Phe Ala Pro
65 70 75 80
Asp Asn Glu Gln Asn Ile Leu Trp Gly Leu Pro Leu Gln Tyr Gly Trp

Gln	Tyr	Arg	Thr	85	Gly	Arg	Leu	Ala	Asp	90	Pro	Thr	Arg	Arg	Thr	95	Asn	Cys
Gly	Tyr	Glu	100	Gly	Asp	His	Met	105	Cys	Ile	Ser	Val	Asp	110	Ser	Trp	Trp	
Ala	Asp	Leu	115	Asn	Tyr	Phe	Leu	120	Ser	Ser	Leu	Pro	Phe	125	Leu	Ala	Ala	Val
Asp	Ser	Gly	130	Val	Met	Gly	Ile	135	Ser	Ser	Asp	Gln	Val	140	Arg	Leu	Leu	Pro
145	Pro	Pro	Lys	Asn	Glu	150	Arg	Lys	Phe	Cys	Tyr	Asp	Val	155	Ser	Ser	Cys	Arg
Ser	Ser	Phe	160	Pro	Glu	165	Thr	Met	Asn	Lys	Tyr	Asp	Tyr	170	Tyr	Ser	Lys	Ala
Glu	Ala	His	180	Phe	Glu	185	Arg	Ser	Trp	Val	Leu	Ala	Val	190	Asp	His	Leu	Ala
Ala	Val	195	Phe	Pro	Thr	200	Thr	Leu	Ile	Arg	Ser	Tyr	205	Lys	Phe	Gln	Lys	
Gly	Met	Pro	Pro	Arg	Ile	210	Leu	Leu	Asn	Thr	Asp	Val	215	Ala	Pro	Phe	Ile	
225	Ser	Asp	Phe	Thr	Ala	220	Phe	Gln	Asn	Val	Val	Leu	225	Val	Leu	Leu	Asn	Met
Leu	Asp	Asn	Val	230	Asp	Lys	Ser	Ile	Ala	235	Leu	Val	240	Ser	Tyr	Pro	Ile	Glu
Ser	Thr	Leu	Asp	245	Asn	Leu	Ala	Val	Val	250	Asp	Trp	255	Pro	Trp	Phe	Lys	Trp
Asp	Tyr	Ser	Ser	260	Thr	Trp	Met	Cys	Thr	265	His	Leu	270	Ser	Lys	Glu	Leu	Leu
Ala	Arg	Tyr	Arg	275	Pro	Ser	Gly	Leu	Lys	280	Ala	Thr	285	Leu	Tyr	Thr	Gly	Phe
305	Ser	Phe	Ser	310	Ile	Tyr	Leu	Arg	Tyr	315	Lys	Pro	320	Tyr	Gln	Ser	Val	Gln
Tyr	Lys	Trp	Cys	325	Pro	Arg	Pro	Thr	Cys	330	Cys	Ile	335	Asp	Phe	Tyr	His	Pro
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<210> 70
 <211> 137
 <212> PRT
 <213> homo sapiens
 <400> 70

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Gly	Arg	Cys	20	Ala	Trp	Ala	Ser	Val	25	Trp	Arg	Cys	Glu	30	Cys	Gly	Arg	
Arg	Ala	Ala	35	Gly	Ala	Ala	Ala	Ser	40	Trp	Ala	Ser	Arg	45	Ala	Trp	Thr	
Pro	Arg	Ala	50	Cys	Pro	Cys	Pro	Ala	55	Cys	Arg	Pro	Ser	60	Cys	Ala	Pro	Thr
65	Trp	Arg	Ser	Arg	Ala	Arg	Arg	Gly	70	Pro	Cys	Cys	Leu	75	Arg	Ala	Ala	
Arg	Ser	Leu	Gly	85	Thr	Trp	Ser	Ala	90	Gly	Trp	Thr	Ala	95	Ala	Ala	Ala	
Ser	Ser	Pro	100	Arg	Ser	Thr	Pro	Ala	105	Gly	Ser	Cys	Cys	110	Val	Arg	Ala	
Cys	Pro	Ser	115	Ala	Pro	Arg	Ser	Gly	120	Pro				125				

<210> 71
 <211> 426
 <212> PRT
 <213> homo sapiens
 <400> 71

Met	Pro	Leu	Leu	Trp	Leu	Arg	Gly	Phe	Leu	Leu	Ala	Ser	Cys	Trp	Ile			
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1	Ile	Val	Arg	Ser	5	Ser	Pro	Thr	Pro	Gly	10	Ser	Glu	Gly	His	Ser	15	Ala	Ala
	Pro	Asp	Cys	20	Ser	Cys	Ala	Leu	25	Ala	Ala	Leu	Pro	Lys	30	Asp	Val	Pro	
	Asn	Ser	Gln	35	Pro	Glu	Met	Val	40	Glu	Ala	Val	Lys	Lys	45	His	Ile	Leu	Asn
	Met	Leu	His	50	Leu	Lys	70	Arg	Pro	Asp	Val	Thr	Gln	Pro	Val	Pro	Lys	80	
	Ala	Ala	Leu	Leu	Asn	85	Ala	Ile	Arg	Lys	90	Leu	His	Val	Gly	Lys	Val	Gly	
	Glu	Asn	Gly	Tyr	100	Val	Glu	Ile	Glu	Asp	105	Asp	Ile	Gly	Arg	Arg	Ala	Glu	
	Met	Asn	Glu	Leu	Met	Glu	Gln	Thr	120	Ser	Glu	Ile	Ile	Thr	Phe	Ala	Glu		
	Ser	Gly	Thr	Ala	Arg	Lys	135	Thr	Leu	His	Phe	Glu	Ile	140	Ser	Lys	Glu	Gly	
	Ser	Asp	Leu	Ser	Val	Val	Glu	Arg	Ala	Glu	Val	Trp	Leu	Phe	Leu	Lys	160		
	Val	Pro	Lys	Ala	Asn	Arg	Thr	Arg	Thr	Lys	170	Val	Thr	Ile	Arg	Leu	Phe		
	Gln	Gln	Gln	Lys	180	His	Pro	Gln	Gly	Ser	185	Leu	Asp	Thr	Gly	Glu	Ala		
	Glu	Glu	Val	Gly	Leu	Lys	Gly	Glu	Arg	Ser	Glu	Leu	Leu	Leu	Ser	Glu			
	Lys	Val	Val	Asp	Ala	Arg	Lys	Ser	Thr	Trp	His	Val	Phe	Pro	Val	Ser			
	Ser	Ser	Ile	Gln	Arg	Leu	230	Leu	Asp	Gln	Gly	Lys	Ser	Ser	Leu	Asp	Val		
	Arg	Ile	Ala	Cys	Glu	Gln	Cys	Gln	Glu	Ser	Gly	Ala	Ser	Leu	Val	Leu			
	Leu	Gly	Lys	Lys	Lys	Lys	Glu	Glu	Glu	Gly	Glu	Gly	Lys	Lys	Lys				
	Gly	Gly	Gly	Glu	Gly	Gly	Ala	Gly	280	Ala	Asp	Glu	Glu	Lys	Glu	Gln	Ser		
	His	Arg	Pro	Phe	Leu	Met	Leu	Gln	Ala	Arg	Gln	Ser	Glu	Asp	His	Pro			
	His	Arg	Arg	Arg	Arg	Arg	Gly	Leu	Glu	Cys	Asp	Gly	Lys	Val	Asn	Ile			
	Cys	Cys	Lys	Lys	Gln	Phe	Phe	Val	Ser	Phe	Lys	Asp	Ile	Gly	Trp	Asn			
	Asp	Trp	Ile	Ile	Ala	Pro	Ser	Gly	Tyr	His	Ala	Asn	Tyr	Cys	Glu	Gly			
	Glu	Cys	Pro	Ser	His	Ile	Ala	Gly	360	Thr	Ser	Gly	Ser	Ser	Leu	Ser	Phe		
	His	Ser	Thr	Val	Ile	Asn	His	Tyr	Arg	Met	Arg	Gly	His	Ser	Pro	Phe			
	Ala	Asn	Leu	Lys	Ser	Cys	Cys	Val	Pro	Thr	Lys	Leu	Arg	Pro	Met	Ser			
	Met	Leu	Tyr	Tyr	Asp	Gly	Gln	Asn	Ile	Ile	Lys	Lys	Asp	Ile	Gln				
	Asn	Met	Ile	Val	Glu	Glu	Cys	Gly	Cys	Ser									

<210> 72

<211> 868

<212> PRT

<213> homo sapiens

<400> 72

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	Ser	Ser	Ser	Ser	Gln	Thr	Ser	Thr	Ser	Ser	Gly	Gly	Gly	Gly	Gly

Pro	Gly	Ala	Ala	Ala	Arg	Arg	Leu	His	Val	Leu	Pro	Cys	Leu	His	Ala
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Phe	Cys	Arg	Pro	Cys	Leu	Glu	Ala	His	Arg	Leu	Pro	Ala	Ala	Gly	Gly
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				85					90					95	
Lys	Val	Val	Leu	Ala	Glu	Ala	Ala	Gly	Met	Asp	Ala	Leu	Pro	Ser	Ser
			100					105					110		
Ala	Phe	Leu	Leu	Asn	Asn	Leu	Leu	Asp	Ala	Val	Val	Ala	Thr	Ala	Asp
		115				120						125			
Glu	Pro	Pro	Pro	Lys	Asn	Gly	Arg	Ala	Gly	Ala	Pro	Ala	Gly	Ala	Gly
	130					135					140				
Gly	His	Ser	Asn	His	Arg	His	His	Ala	His	His	Ala	His	Pro	Arg	Ala
145					150					155					160
Ser	Ala	Ser	Ala	Pro	Pro	Leu	Pro	Gln	Ala	Pro	Gln	Pro	Pro	Ala	Pro
				165					170					175	
Ser	Arg	Ser	Ala	Pro	Gly	Gly	Pro	Ala	Ala	Ser	Pro	Ser	Ala	Leu	Leu
			180					185					190		
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		195					200					205			
Ser	Ser	Arg	Cys	Leu	Asp	Cys	Gln	Glu	His	Leu	Cys	Asp	Asn	Cys	Val
	210					215					220				
Arg	Ala	His	Gln	Arg	Val	Arg	Leu	Thr	Lys	Asp	His	Tyr	Ile	Glu	Arg
225					230					235					240
Gly	Pro	Pro	Gly	Pro	Gly	Ala	Ala	Ala	Ala	Ala	Gln	Gln	Leu	Gly	Leu
				245					250					255	
Gly	Pro	Pro	Phe	Pro	Gly	Pro	Pro	Phe	Ser	Ile	Leu	Ser	Val	Phe	Pro
			260					265					270		
Glu	Arg	Leu	Gly	Phe	Cys	Gln	His	His	Asp	Asp	Glu	Val	Leu	His	Leu
		275					280					285			
Tyr	Cys	Asp	Thr	Cys	Ser	Val	Pro	Ile	Cys	Arg	Glu	Cys	Thr	Met	Gly
	290					295					300				
Arg	His	Gly	Gly	His	Ser	Phe	Ile	Tyr	Leu	Gln	Glu	Ala	Leu	Gln	Asp
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Ser	Arg	Ala	Leu	Thr	Ile	Gln	Leu	Leu	Ala	Asp	Ala	Gln	Gln	Gly	Arg
				325					330					335	
Gln	Ala	Ile	Gln	Leu	Ser	Ile	Glu	Gln	Ala	Gln	Thr	Val	Ala	Glu	Gln
			340					345					350		
Val	Glu	Met	Lys	Ala	Lys	Val	Val	Gln	Ser	Glu	Val	Lys	Ala	Val	Thr
		355					360					365			
Ala	Arg	His	Lys	Lys	Ala	Leu	Glu	Glu	Arg	Glu	Cys	Glu	Leu	Leu	Trp
	370					375					380				
Lys	Val	Glu	Lys	Ile	Arg	Gln	Val	Lys	Ala	Lys	Ser	Leu	Tyr	Leu	Gln
385					390					395					400
Val	Glu	Lys	Leu	Arg	Gln	Asn	Leu	Asn	Lys	Leu	Glu	Ser	Thr	Ile	Ser
				405					410					415	
Ala	Val	Gln	Gln	Val	Leu	Glu	Glu	Gly	Arg	Ala	Leu	Asp	Ile	Leu	Leu
			420					425					430		
Ala	Arg	Asp	Arg	Met	Leu	Ala	Gln	Val	Gln	Glu	Leu	Lys	Thr	Val	Arg
		435					440					445			
Ser	Leu	Leu	Gln	Pro	Gln	Glu	Asp	Asp	Arg	Val	Met	Phe	Thr	Pro	Pro
	450					455					460				
Asp	Gln	Ala	Leu	Tyr	Leu	Ala	Ile	Lys	Ser	Phe	Gly	Phe	Val	Ser	Ser
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Gly	Ala	Phe	Ala	Pro	Leu	Thr	Lys	Ala	Thr	Gly	Asp	Gly	Leu	Lys	Arg
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Ala	Leu	Gln	Gly	Lys	Val	Ala	Ser	Phe	Thr	Val	Ile	Gly	Tyr	Asp	His
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Asp	Gly	Glu	Pro	Arg	Leu	Ser	Gly	Gly	Asp	Leu	Met	Ser	Ala	Val	Val
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Asn	Gly	Thr	Tyr	Val	Val	Ser	Tyr	Arg	Pro	Gln	Leu	Glu	Gly	Glu	His
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Leu	Val	Ser	Val	Thr	Leu	Cys	Asn	Gln	His	Ile	Glu	Asn	Ser	Pro	Phe
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Lys	Val	Val	Val	Lys	Ser	Gly	Arg	Ser	Tyr	Val	Gly	Ile	Gly	Leu	Pro
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Gly	Leu	Ser	Phe	Gly	Ser	Glu	Gly	Asp	Ser	Asp	Gly	Lys	Leu	Cys	Arg
		595					600					605			
Pro	Trp	Gly	Val	Ser	Val	Asp	Lys	Glu	Gly	Tyr	Ile	Ile	Val	Ala	Asp
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Arg	Ser	Asn	Asn	Arg	Ile	Gln	Val	Phe	Lys	Pro	Cys	Gly	Ala	Phe	His
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His	Lys	Phe	Gly	Thr	Leu	Gly	Ser	Arg	Pro	Gly	Gln	Phe	Asp	Arg	Pro
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Ala	Gly	Val	Ala	Cys	Asp	Ala	Ser	Arg	Arg	Ile	Val	Val	Ala	Asp	Lys
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Asp	Asn	His	Arg	Ile	Gln	Ile	Phe	Thr	Phe	Glu	Gly	Gln	Phe	Leu	Leu
		675										685			
Lys	Phe	Gly	Glu	Lys	Gly	Thr	Lys	Asn	Gly	Gln	Phe	Asn	Tyr	Pro	Trp
	690					695						700			
Asp	Val	Ala	Val	Asn	Ser	Glu	Gly	Lys	Ile	Leu	Val	Ser	Asp	Thr	Arg
	705				710					715					720
Asn	His	Arg	Ile	Gln	Leu	Phe	Gly	Pro	Asp	Gly	Val	Phe	Leu	Asn	Lys
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Tyr	Gly	Phe	Glu	Gly	Ala	Leu	Trp	Lys	His	Phe	Asp	Ser	Pro	Arg	Gly
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Val	Ala	Phe	Asn	His	Glu	Gly	His	Leu	Val	Val	Thr	Asp	Phe	Asn	Asn
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His	Arg	Leu	Leu	Val	Ile	His	Pro	Asp	Cys	Gln	Ser	Ala	Arg	Phe	Leu
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Gly	Ser	Glu	Gly	Thr	Gly	Asn	Gly	Gln	Phe	Leu	Arg	Pro	Gln	Gly	Val
	785				790					795					800
Ala	Val	Asp	Gln	Glu	Gly	Arg	Ile	Ile	Val	Ala	Asp	Ser	Arg	Asn	His
				805					810					815	
Arg	Val	Gln	Met	Phe	Glu	Ser	Asn	Gly	Ser	Phe	Leu	Cys	Lys	Phe	Gly
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Ala	Gln	Gly	Ser	Gly	Phe	Gly	Gln	Met	Asp	Arg	Pro	Ser	Gly	Ile	Ala
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Ile 865
Leu Val Phe

<210> 73
<211> 3477
<212> PRT
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			20					25					30		
Ala	Ser	Ser	Pro	Pro	Val	Leu	Ser	Leu	Ser	His	Phe	Cys	Arg	Ser	Pro
		35					40					45			
Phe	Leu	Cys	Phe	Gly	Asp	Val	Leu	Leu	Gly	Ala	Ser	Arg	Thr	Leu	Ser
	50					55					60				
Leu	Ala	Leu	Asp	Asn	Pro	Asn	Glu	Glu	Val	Ala	Glu	Val	Lys	Ile	Ser
	65				70					75					80
His	Phe	Pro	Ala	Ala	Asp	Leu	Gly	Phe	Ser	Val	Ser	Gln	Arg	Cys	Phe
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Val	Leu	Gln	Pro	Lys	Glu	Lys	Ile	Val	Ile	Ser	Val	Asn	Trp	Thr	Pro
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Leu	Lys	Glu	Gly	Arg	Val	Arg	Glu	Ile	Met	Thr	Phe	Leu	Val	Asn	Asp
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Val	Leu	Lys	His	Gln	Ala	Ile	Leu	Leu	Gly	Asn	Ala	Glu	Glu	Gln	Lys
	130					135					140				
Lys	Lys	Lys	Arg	Ser	Leu	Trp	Asp	Thr	Ile	Lys	Lys	Lys	Lys	Ile	Ser

145	Ala	Ser	Thr	Ser	His	150	Asn	Arg	Arg	Val	Ser	155	Asn	Ile	Gln	Asn	Val	160	Asn
	Lys	Thr	Phe	Ser	165		Ser	Gln	Lys	Val	170	Asp	Arg	Val	Arg	Ser	175	Pro	Leu
	Gln	Ala	Cys	Glu	180		Asn	Leu	Ala	Met	185	Asn	Glu	Gly	Gly	Pro	190	Pro	Thr
	Asn	Asn	Ser	Leu	195		Ile	Leu	Glu	Glu	200	Asn	Lys	Ile	Pro	Ile	Ser	Pro	Ile
	Ser	210	Pro	Ala	Phe	Asn	Glu	215	Cys	His	Gly	Ala	Thr	220	Cys	Leu	Pro	Leu	Ser
	Val	Arg	Arg	Ser	225	Thr	Thr	Tyr	Ser	Ser	230	Leu	His	235	Ala	Ser	Glu	Asn	Arg
	Glu	Leu	Leu	Asn	245	Val	His	Ser	Ala	Asn	250	Val	Ser	Lys	Val	Ser	255	Phe	Asn
	Glu	Lys	Ala	Val	260	Thr	Glu	Thr	Ser	265	Phe	Asn	Ser	Val	Asn	270	Val	Asn	Gly
	Gln	Arg	Gly	Glu	275	Asn	Ser	Lys	Leu	Ser	280	Leu	Thr	Pro	Asn	285	Cys	Ser	Ser
	Thr	Leu	Asn	Ile	290	Thr	Gln	Ser	Gln	Ile	295	His	Phe	Leu	Ser	300	Pro	Asp	Ser
	Phe	Val	Asn	Asn	305	Ser	His	Gly	Ala	Asn	310	Asn	Glu	Leu	Glu	Leu	Val	315	Thr
	Cys	Leu	Ser	Ser	325	Asp	Met	Phe	Met	Lys	330	Asp	Asn	Ser	Gln	Pro	Val	335	His
	Leu	Glu	Ser	Thr	340	Ile	Ala	His	Glu	Ile	345	Tyr	Gln	Lys	Ile	350	Leu	Ser	Pro
	Asp	Ser	Phe	Ile	355	Lys	Asp	Asn	Tyr	Gly	360	Leu	Asn	Gln	Asp	365	Leu	Glu	Ser
	Glu	Ser	Val	Asn	370	Pro	Ile	Leu	Ser	Pro	375	Asn	Gln	Phe	Leu	Lys	Asp	Asn	400
	Met	Ala	Tyr	Met	385	Cys	Thr	Ser	Gln	Gln	390	Thr	Cys	Lys	Val	Pro	Leu	Ser	415
	Asn	Glu	Asn	Ser	405	Gln	Val	Pro	Gln	Ser	410	Pro	Glu	Asp	Trp	Arg	Lys	Ser	430
	Glu	Val	Ser	Pro	420	Arg	Ile	Pro	Glu	Cys	425	Gln	Gly	Ser	Lys	Ser	Pro	Lys	445
	Ala	Ile	Phe	Glu	435	Glu	Leu	Val	Glu	Met	440	Lys	Ser	Asn	Tyr	Tyr	Ser	Phe	460
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	His	Ser	His	Asn	465	Lys	Gln	Pro	Lys	Arg	470	Arg	Pro	Ile	Leu	Ser	Ala	Thr	480
	Val	Thr	Lys	Arg	485	Lys	Ala	Thr	Cys	Thr	490	Arg	Glu	Asn	Gln	Thr	Glu	Ile	495
	Asn	Lys	Pro	Lys	500	Ala	Lys	Arg	Cys	Leu	505	Asn	Ser	Ala	Val	510	Gly	Glu	His
	Glu	Lys	Val	Ile	515	Asn	Asn	Gln	Lys	Glu	520	Lys	Glu	Asp	Phe	His	Ser	Tyr	525
	Leu	Pro	Ile	Ile	530	Asp	Pro	Ile	Leu	Ser	535	Lys	Ser	Lys	Ser	Tyr	Lys	Asn	540
	Glu	Val	Thr	Pro	545	Ser	Ser	Thr	Thr	Ala	550	Ser	Val	Ala	Arg	Lys	Arg	Lys	555
	Ser	Asp	Gly	Ser	565	Met	Glu	Asp	Ala	Asn	570	Val	Arg	Val	Ala	Ile	Thr	Glu	575
	His	Thr	Glu	Val	580	Arg	Glu	Ile	Lys	Arg	585	Ile	His	Phe	Ser	Pro	Ser	Glu	590
	Pro	Lys	Thr	Ser	595	Ala	Val	Lys	Lys	Thr	600	Lys	Asn	Val	Thr	Thr	Pro	Ile	605
	Ser	Lys	Arg	Ile	610	Ser	Asn	Arg	Glu	Lys	615	Leu	Asn	Leu	Lys	Lys	Lys	Thr	620
	Asp	Leu	Ser	Ile	625	Phe	Arg	Thr	Pro	Ile	630	Ser	Lys	Thr	Asn	Lys	Arg	Thr	635
	Lys	Pro	Ile	Ile	645	Ala	Val	Ala	Gln	Ser	650	Ser	Leu	Thr	Phe	Ile	Lys	Pro	655

Leu	Lys	Thr	660	Asp	Ile	Pro	Arg	His	665	Pro	Met	Pro	Phe	Ala	670	Ala	Lys	Asn
		675							680					685				
Met	Phe	Tyr	Asp	Glu	Arg	Trp	Lys	Glu	Lys	Gln	Glu	Gln	Gly	Phe	Thr			
	690					695						700						
Trp	Trp	Leu	Asn	Phe	Ile	Leu	Thr	Pro	Asp	Asp	Phe	Thr	Val	Lys	Thr			
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Asn	Ile	Ser	Glu	Val	Asn	Ala	Ala	Thr	Leu	Leu	Gly	Ile	Glu	Asn				
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Gln	His	Lys	Ile	Ser	Val	Pro	Arg	Ala	Pro	Thr	Lys	Glu	Glu	Met	Ser			
		740						745					750					
Leu	Arg	Ala	Tyr	Thr	Ala	Arg	Cys	Arg	Leu	Asn	Arg	Leu	Arg	Arg	Ala			
	755						760					765						
Ala	Cys	Arg	Leu	Phe	Thr	Ser	Glu	Lys	Met	Val	Lys	Ala	Ile	Lys	Lys			
	770					775					780							
Leu	Glu	Ile	Glu	Ile	Glu	Ala	Arg	Arg	Leu	Ile	Val	Arg	Lys	Asp	Arg			
785					790					795					800			
His	Leu	Trp	Lys	Asp	Val	Gly	Glu	Arg	Gln	Lys	Val	Leu	Asn	Trp	Leu			
			805						810					815				
Leu	Ser	Tyr	Asn	Pro	Leu	Trp	Leu	Arg	Ile	Gly	Leu	Glu	Thr	Thr	Tyr			
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Gly	Glu	Leu	Ile	Ser	Leu	Glu	Asp	Asn	Ser	Asp	Val	Thr	Gly	Leu	Ala			
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Tyr	Arg	His	Pro	Thr	Val	Pro	His	Leu	Tyr	Arg	Asp	Gly	His	Glu	Glu			
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Ala	Leu	Ser	Lys	Phe	Thr	Leu	Lys	Lys	Leu	Leu	Leu	Val	Cys	Phe				
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Leu	Asp	Tyr	Ala	Lys	Ile	Ser	Arg	Leu	Ile	Asp	His	Asp	Pro	Cys	Leu			
		900						905					910					
Phe	Cys	Lys	Asp	Ala	Glu	Phe	Lys	Ala	Ser	Lys	Glu	Ile	Leu	Leu	Ala			
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Phe	Ser	Arg	Asp	Phe	Leu	Ser	Gly	Glu	Gly	Asp	Leu	Ser	Arg	His	Leu			
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		980						985					990					
Lys	Lys	Leu	Arg	Ile	Pro	Ala	Ile	Ser	Arg	Leu	Gln	Lys	Met	His	Asn			
		995					1000					1005						
Val	Asp	Ile	Val	Leu	Gln	Val	Leu	Lys	Ser	Arg	Gly	Ile	Glu	Leu				
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Ser	Asp	Glu	His	Gly	Asn	Thr	Ile	Leu	Ser	Lys	Asp	Ile	Val	Asp				
	1025					1030					1035							
Arg	His	Arg	Glu	Lys	Thr	Leu	Arg	Leu	Leu	Trp	Lys	Ile	Ala	Phe				
	1040					1045					1050							
Ala	Phe	Gln	Val	Asp	Ile	Ser	Leu	Asn	Leu	Asp	Gln	Leu	Lys	Glu				
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	1070					1075					1080							
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	1115					1120					1125							
Lys	Lys	Val	Glu	Asn	Phe	Thr	Val	Ser	Phe	Ser	Asp	Gly	Arg	Val				
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1160	Thr Gly Ser Val Val Leu	1165	Asn Ser Ser Ser Glu	1170	Ser Asp Asp Ser
1175	Ser Leu Asp Met Ser Leu	1180	Lys Ala Phe Asp His	1185	Glu Asn Thr Ser
1190	Glu Leu Tyr Lys Glu Leu	1195	Leu Glu Asn Glu Lys	1200	Lys Asn Phe His
1205	Leu Val Arg Ser Ala Val	1210	Arg Asp Leu Gly Gly	1215	Ile Pro Ala Met
1220	Ile Asn His Ser Asp Met	1225	Ser Asn Thr Ile Pro	1230	Asp Glu Lys Val
1235	Val Ile Thr Tyr Leu Ser	1240	Phe Leu Cys Ala Arg	1245	Leu Leu Asp Leu
1250	Arg Lys Glu Ile Arg Ala	1255	Ala Arg Leu Ile Gln	1260	Thr Thr Trp Arg
1265	Lys Tyr Lys Leu Lys Thr	1270	Asp Leu Lys Arg His	1275	Gln Glu Arg Glu
1280	Lys Ala Ala Arg Ile Ile	1285	Gln Leu Ala Val Ile	1290	Asn Phe Leu Ala
1295	Lys Gln Arg Leu Arg Lys	1300	Arg Val Asn Ala Ala	1305	Leu Val Ile Gln
1310	Lys Tyr Trp Arg Arg Val	1315	Leu Ala Gln Arg Lys	1320	Leu Leu Met Leu
1325	Lys Lys Glu Lys Leu Glu	1330	Lys Val Gln Asn Lys	1335	Ala Ala Ser Leu
1340	Ile Gln Gly Tyr Trp Arg	1345	Arg Tyr Ser Thr Arg	1350	Gln Arg Phe Leu
1355	Lys Leu Lys Tyr Tyr Ser	1360	Ile Ile Leu Gln Ser	1365	Arg Ile Arg Met
1370	Ile Ile Ala Val Thr Ser	1375	Tyr Lys Arg Tyr Leu	1380	Trp Ala Thr Val
1385	Thr Ile Gln Arg His Trp	1390	Arg Ala Tyr Leu Arg	1395	Arg Lys Gln Asp
1400	Gln Gln Arg Tyr Glu Met	1405	Leu Lys Ser Ser Thr	1410	Leu Ile Ile Gln
1415	Ser Met Phe Arg Lys Trp	1420	Lys Gln Arg Lys Met	1425	Gln Ser Gln Val
1430	Lys Ala Thr Val Ile Leu	1435	Gln Arg Ala Phe Arg	1440	Glu Trp His Leu
1445	Arg Lys Gln Ala Lys Glu	1450	Asn Ser Ala Ile Ile	1455	Ile Ile Gln Ser
1460	Trp Tyr Arg Met His Lys	1465	Glu Leu Arg Lys Tyr	1470	Ile Tyr Ile Arg
1475	Ser Cys Val Val Ile Ile	1480	Gln Lys Arg Phe Arg	1485	Cys Phe Gln Ala
1490	Gln Lys Leu Tyr Lys Arg	1495	Arg Lys Glu Ser Ile	1500	Leu Thr Ile Gln
1505	Lys Tyr Tyr Lys Ala Tyr	1510	Leu Lys Gly Lys Ile	1515	Glu Arg Thr Asn
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1580	Arg Lys His Gln Gln Arg	1585	Gln Lys Tyr Lys Lys	1590	Met Lys Lys Ala
1595	Ala Val Ile Ile Gln Thr	1600	His Phe Arg Ala Tyr	1605	Ile Phe Ala Met
1610	Lys Val Leu Ala Ser Tyr	1615	Gln Lys Thr Arg Ser	1620	Ala Val Ile Val
1625	Leu Gln Ser Ala Tyr Arg	1630	Gly Met Gln Ala Arg	1635	Lys Met Tyr Ile

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1670	Lys	Leu	Gln	Ser	Thr	Val	1675	Lys	Met	Lys	Gln	Thr	1680	Arg	Lys	Gln	Tyr
1685	Leu	His	Leu	Arg	Ala	Ala	1690	Ala	Leu	Phe	Ile	Gln	1695	Gln	Cys	Tyr	Arg
1700	Ser	Lys	Lys	Ile	Ala	Ala	1705	Gln	Lys	Arg	Glu	Glu	1710	Tyr	Met	Gln	Met
1715	Arg	Glu	Ser	Cys	Ile	Lys	1720	Leu	Gln	Ala	Phe	Val	1725	Arg	Gly	Tyr	Leu
1730	Val	Arg	Lys	Gln	Met	Arg	1735	Leu	Gln	Arg	Lys	Ala	1740	Val	Ile	Ser	Leu
1745	Gln	Ser	Tyr	Phe	Arg	Met	1750	Arg	Lys	Ala	Arg	Gln	1755	Tyr	Tyr	Leu	Lys
1760	Met	Tyr	Lys	Ala	Ile	Ile	1765	Val	Ile	Gln	Asn	Tyr	1770	Tyr	His	Ala	Tyr
1775	Lys	Ala	Gln	Val	Asn	Gln	1780	Arg	Lys	Asn	Phe	Leu	1785	Gln	Val	Lys	Lys
1790	Ala	Ala	Thr	Cys	Leu	Gln	1795	Ala	Ala	Tyr	Arg	Gly	1800	Tyr	Lys	Val	Arg
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1820	Ala	Phe	Arg	Gly	Tyr	Asn	1825	Lys	Arg	Val	Lys	Tyr	1830	Gln	Ser	Val	Leu
1835	Gln	Ser	Ile	Ile	Lys	Ile	1840	Gln	Arg	Trp	Tyr	Arg	1845	Ala	Tyr	Lys	Thr
1850	Leu	His	Asp	Thr	Arg	Thr	1855	His	Phe	Leu	Lys	Thr	1860	Lys	Ala	Ala	Val
1865	Ile	Ser	Leu	Gln	Ser	Ala	1870	Tyr	Arg	Gly	Trp	Lys	1875	Val	Arg	Lys	Gln
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1895	Arg	Met	Ala	Lys	Ala	Gln	1900	Lys	Gln	Phe	Arg	Leu	1905	Phe	Lys	Thr	Ala
1910	Ala	Leu	Val	Ile	Gln	Gln	1915	Asn	Phe	Arg	Ala	Trp	1920	Thr	Ala	Gly	Arg
1925	Lys	Gln	Cys	Met	Glu	Tyr	1930	Ile	Glu	Leu	Arg	His	1935	Ala	Val	Leu	Val
1940	Leu	Gln	Ser	Met	Trp	Lys	1945	Gly	Lys	Thr	Leu	Arg	1950	Arg	Gln	Leu	Gln
1955	Arg	Gln	His	Lys	Cys	Ala	1960	Ile	Ile	Ile	Gln	Ser	1965	Tyr	Tyr	Arg	Met
1970	His	Val	Gln	Gln	Lys	Lys	1975	Trp	Lys	Ile	Met	Lys	1980	Lys	Ala	Ala	Leu
1985	Leu	Ile	Gln	Lys	Tyr	Tyr	1990	Arg	Ala	Tyr	Ser	Ile	1995	Gly	Arg	Glu	Gln
2000	Asn	His	Leu	Tyr	Leu	Lys	2005	Thr	Lys	Ala	Ala	Val	2010	Val	Thr	Leu	Gln
2015	Ser	Ala	Tyr	Arg	Gly	Met	2020	Lys	Val	Arg	Lys	Arg	2025	Ile	Lys	Asp	Cys
2030	Asn	Lys	Ala	Ala	Val	Thr	2035	Ile	Gln	Ser	Lys	Tyr	2040	Arg	Ala	Tyr	Lys
2045	Thr	Lys	Lys	Lys	Tyr	Ala	2050	Thr	Tyr	Arg	Ala	Ser	2055	Ala	Ile	Ile	Ile
2060	Gln	Arg	Trp	Tyr	Arg	Gly	2065	Ile	Lys	Ile	Thr	Asn	2070	His	Gln	His	Lys
2075	Glu	Tyr	Leu	Asn	Leu	Lys	2080	Lys	Thr	Ala	Ile	Lys	2085	Ile	Gln	Ser	Val
2090	Tyr	Arg	Gly	Ile	Arg	Val	2095	Arg	Arg	His	Ile	Gln	2100	His	Met	His	Arg
2105	Ala	Ala	Thr	Phe	Ile	Lys	2110	Ala	Met	Phe	Lys	Met	2115	His	Gln	Ser	Arg

Ile	2120	Ser	Tyr	His	Thr	Met	Arg	Lys	Ala	Ala	Ile	Val	Ile	Gln	Val
Arg	2135	Cys	Arg	Ala	Tyr	Tyr	Gln	Gly	Lys	Met	Gln	Arg	Glu	Lys	Tyr
Leu	2150	Thr	Ile	Leu	Lys	Ala	Val	Lys	Val	Leu	Gln	Ala	Ser	Phe	Arg
Gly	2165	Val	Arg	Val	Arg	Arg	Thr	Leu	Arg	Lys	Met	Gln	Thr	Ala	Ala
Thr	2180	Leu	Ile	Gln	Ser	Asn	Tyr	Arg	Arg	Tyr	Arg	Gln	Gln	Thr	Tyr
Phe	2195	Asn	Lys	Leu	Lys	Lys	Ile	Thr	Lys	Thr	Val	Gln	Gln	Arg	Tyr
Trp	2210	Ala	Met	Lys	Glu	Arg	Asn	Ile	Gln	Phe	Gln	Arg	Tyr	Asn	Lys
Leu	2225	Arg	His	Ser	Val	Ile	Tyr	Ile	Gln	Ala	Ile	Phe	Arg	Gly	Lys
Lys	2240	Ala	Arg	Arg	His	Leu	Lys	Met	Met	His	Ile	Ala	Ala	Thr	Leu
Ile	2255	Gln	Arg	Arg	Phe	Arg	Thr	Leu	Met	Met	Arg	Arg	Arg	Phe	Leu
Ser	2270	Leu	Lys	Lys	Thr	Ala	Ile	Leu	Ile	Gln	Arg	Lys	Tyr	Arg	Ala
His	2285	Leu	Cys	Thr	Lys	His	His	Leu	Gln	Phe	Leu	Gln	Val	Gln	Asn
Ala	2300	Val	Ile	Lys	Ile	Gln	Ser	Ser	Tyr	Arg	Arg	Trp	Met	Ile	Arg
Lys	2315	Arg	Met	Arg	Glu	Met	His	Arg	Ala	Ala	Thr	Phe	Ile	Gln	Ser
Thr	2330	Phe	Arg	Met	His	Arg	Leu	His	Met	Arg	Tyr	Arg	Ala	Leu	Lys
Gln	2345	Ala	Ser	Val	Val	Ile	Gln	Gln	Gln	Tyr	Gln	Ala	Asn	Arg	Ala
Ala	2360	Lys	Leu	Gln	Arg	Gln	His	Tyr	Leu	Arg	Gln	Arg	His	Ser	Ala
Val	2375	Ile	Leu	Gln	Ala	Ala	Phe	Arg	Gly	Met	Lys	Thr	Arg	Arg	His
Leu	2390	Lys	Ser	Met	His	Ser	Ser	Ala	Thr	Leu	Ile	Gln	Ser	Arg	Phe
Arg	2405	Ser	Leu	Leu	Val	Arg	Arg	Arg	Phe	Ile	Ser	Leu	Lys	Lys	Ala
Thr	2420	Ile	Phe	Val	Gln	Arg	Lys	Tyr	Arg	Ala	Thr	Ile	Cys	Ala	Lys
His	2435	Lys	Leu	Tyr	Gln	Phe	Leu	His	Leu	Arg	Lys	Ala	Ala	Ile	Thr
Ile	2450	Gln	Ser	Ser	Tyr	Arg	Arg	Leu	Met	Val	Lys	Lys	Lys	Leu	Gln
Glu	2465	Met	Gln	Arg	Ala	Ala	Val	Leu	Ile	Gln	Ala	Thr	Phe	Arg	Met
His	2480	Arg	Thr	Tyr	Ile	Thr	Phe	Gln	Thr	Trp	Lys	His	Ala	Ser	Ile
Leu	2495	Ile	Gln	Gln	His	Tyr	Arg	Thr	Tyr	Arg	Ala	Ala	Lys	Leu	Gln
Arg	2510	Glu	Asn	Tyr	Ile	Arg	Gln	Trp	His	Ser	Ala	Val	Val	Ile	Gln
Ala	2525	Ala	Tyr	Lys	Gly	Met	Lys	Ala	Arg	Gln	Leu	Leu	Arg	Glu	Lys
His	2540	Lys	Ala	Ser	Ile	Val	Ile	Gln	Ser	Thr	Tyr	Arg	Met	Tyr	Arg
Gln	2555	Tyr	Cys	Phe	Tyr	Gln	Lys	Leu	Gln	Trp	Ala	Thr	Lys	Ile	Ile
Gln	2570	Glu	Lys	Tyr	Arg	Ala	Asn	Lys	Lys	Lys	Gln	Lys	Val	Phe	Gln
His	2585	Asn	Glu	Leu	Lys	Lys	Glu	Thr	Cys	Val	Gln	Ala	Gly	Phe	Gln

2600	Asp Met	Asn Ile Lys Lys	2605	Gln Ile Gln Glu Gln	2610	His Gln Ala Ala
2615	Ile Ile	Ile Gln Lys His	2620	Cys Lys Ala Phe Lys	2625	Ile Arg Lys His
2630	Tyr Leu	His Leu Arg Ala	2635	Thr Val Val Ser Ile	2640	Gln Arg Arg Tyr
2645	Arg Lys	Leu Thr Ala Val	2650	Arg Thr Gln Ala Val	2655	Ile Cys Ile Gln
2660	Ser Tyr	Tyr Arg Gly Phe	2665	Lys Val Arg Lys Asp	2670	Ile Gln Asn Met
2675	His Arg	Ala Ala Thr Leu	2680	Ile Gln Ser Phe Tyr	2685	Arg Met His Arg
2690	Ala Lys	Val Asp Tyr Glu	2695	Thr Lys Lys Thr Ala	2700	Ile Val Val Ile
2705	Gln Asn	Tyr Tyr Arg Leu	2710	Val Arg Val Lys	2715	Thr Glu Arg Lys
2720	Asn Phe	Leu Ala Val Gln	2725	Lys Ser Val Arg Thr	2730	Ile Gln Ala Ala
2735	Phe Arg	Gly Met Lys Val	2740	Arg Gln Lys Leu Lys	2745	Asn Val Ser Glu
2750	Glu Lys	Met Ala Ala Ile	2755	Val Asn Gln Ser Ala	2760	Leu Cys Cys Tyr
2765	Arg Ser	Lys Thr Gln Tyr	2770	Glu Ala Val Gln Ser	2775	Glu Gly Val Met
2780	Ile Gln	Glu Trp Tyr Lys	2785	Ala Ser Gly Leu Ala	2790	Cys Ser Gln Glu
2795	Ala Glu	Tyr His Ser Gln	2800	Ser Arg Ala Ala Val	2805	Thr Ile Gln Lys
2810	Ala Phe	Cys Arg Met Val	2815	Thr Arg Lys Leu Glu	2820	Thr Gln Lys Cys
2825	Ala Ala	Leu Arg Ile Gln	2830	Phe Phe Leu Gln Met	2835	Ala Val Tyr Arg
2840	Arg Arg	Phe Val Gln Gln	2845	Lys Arg Ala Ala Ile	2850	Thr Leu Gln His
2855	Tyr Phe	Arg Thr Trp Gln	2860	Thr Arg Lys Gln Phe	2865	Leu Leu Tyr Arg
2870	Lys Ala	Ala Val Val Leu	2875	Gln Asn His Tyr Arg	2880	Ala Phe Leu Ser
2885	Ala Lys	His Gln Arg Gln	2890	Val Tyr Leu Gln Ile	2895	Arg Ser Ser Val
2900	Ile Ile	Ile Gln Ala Arg	2905	Ser Lys Gly Phe Ile	2910	Gln Lys Arg Lys
2915	Phe Gln	Glu Ile Lys Asn	2920	Ser Thr Ile Lys Ile	2925	Gln Ala Met Trp
2930	Arg Arg	Tyr Arg Ala Lys	2935	Lys Tyr Leu Cys Lys	2940	Val Lys Ala Ala
2945	Cys Lys	Ile Gln Ala Trp	2950	Tyr Arg Cys Trp Arg	2955	Ala His Lys Glu
2960	Tyr Leu	Ala Ile Leu Lys	2965	Ala Val Lys Ile Ile	2970	Gln Gly Cys Phe
2975	Tyr Thr	Lys Leu Glu Arg	2980	Thr Arg Phe Leu Asn	2985	Val Arg Ala Ser
2990	Ala Ile	Ile Ile Gln Arg	2995	Lys Trp Arg Ala Ile	3000	Leu Pro Ala Lys
3005	Ile Ala	His Glu His Phe	3010	Leu Met Ile Lys Arg	3015	His Arg Ala Ala
3020	Cys Leu	Ile Gln Ala His	3025	Tyr Arg Gly Tyr Lys	3030	Gly Arg Gln Val
3035	Phe Leu	Arg Gln Lys Ser	3040	Ala Ala Leu Ile Ile	3045	Gln Lys Tyr Ile
3050	Arg Ala	Arg Glu Ala Gly	3055	Lys His Glu Arg Ile	3060	Lys Tyr Ile Glu
3065	Phe Lys	Lys Ser Thr Val	3070	Ile Leu Gln Ala Leu	3075	Val Arg Gly Trp

3080	Leu Val Arg Lys Arg Phe	3085	Leu Glu Gln Arg Ala	3090	Lys Ile Arg Leu
3095	Leu His Phe Thr Ala Ala	3100	Ala Tyr Tyr His Leu	3105	Asn Ala Val Arg
3110	Ile Gln Arg Ala Tyr Lys	3115	Leu Tyr Leu Ala Val	3120	Lys Asn Ala Asn
3125	Lys Gln Val Asn Ser Val	3130	Ile Cys Ile Gln Arg	3135	Trp Phe Arg Ala
3140	Arg Leu Gln Glu Lys Arg	3145	Phe Ile Gln Lys Tyr	3150	His Ser Ile Lys
3155	Lys Ile Glu His Glu Gly	3160	Gln Glu Cys Leu Ser	3165	Gln Arg Asn Arg
3170	Ala Ala Ser Val Ile Gln	3175	Lys Ala Val Arg His	3180	Phe Leu Leu Arg
3185	Lys Lys Gln Glu Lys Phe	3190	Thr Ser Gly Ile Ile	3195	Lys Ile Gln Ala
3200	Leu Trp Arg Gly Tyr Ser	3205	Trp Arg Lys Lys Asn	3210	Asp Cys Thr Lys
3215	Ile Lys Ala Ile Arg Leu	3220	Ser Leu Gln Val Val	3225	Asn Arg Glu Ile
3230	Arg Glu Glu Asn Lys Leu	3235	Tyr Lys Arg Thr Ala	3240	Leu Ala Leu His
3245	Tyr Leu Leu Thr Tyr Lys	3250	His Leu Ser Ala Ile	3255	Leu Glu Ala Leu
3260	Lys His Leu Glu Val Val	3265	Thr Arg Leu Ser Pro	3270	Leu Cys Cys Glu
3275	Asn Met Ala Gln Ser Gly	3280	Ala Ile Ser Lys Ile	3285	Phe Val Leu Ile
3290	Arg Ser Cys Asn Arg Ser	3295	Ile Pro Cys Met Glu	3300	Val Ile Arg Tyr
3305	Ala Val Gln Val Leu Leu	3310	Asn Val Ser Lys Tyr	3315	Glu Lys Thr Thr
3320	Ser Ala Val Tyr Asp Val	3325	Glu Asn Cys Ile Asp	3330	Ile Leu Leu Glu
3335	Leu Leu Gln Ile Tyr Arg	3340	Glu Lys Pro Gly Asn	3345	Lys Val Ala Asp
3350	Lys Gly Gly Ser Ile Phe	3355	Thr Lys Thr Cys Cys	3360	Leu Leu Ala Ile
3365	Leu Leu Lys Thr Thr Asn	3370	Arg Ala Ser Asp Val	3375	Arg Ser Arg Ser
3380	Lys Val Val Asp Arg Ile	3385	Tyr Ser Leu Tyr Lys	3390	Leu Thr Ala His
3395	Lys His Lys Met Asn Thr	3400	Glu Arg Ile Leu Tyr	3405	Lys Gln Lys Lys
3410	Asn Ser Ser Ile Ser Ile	3415	Pro Phe Ile Pro Glu	3420	Thr Pro Val Arg
3425	Thr Arg Ile Val Ser Arg	3430	Leu Lys Pro Asp Trp	3435	Val Leu Arg Arg
3440	Asp Asn Met Glu Glu Ile	3445	Thr Asn Pro Leu Gln	3450	Ala Ile Gln Met
3455	Val Met Asp Thr Leu Gly	3460	Ile Pro Tyr	3465	
3470		3475			

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<211> 398

<212> PRT

<213> homo sapiens

<400> 74

Met	Ala	Ala	Val	Ala	Val	Leu	Arg	Asn	Asp	Ser	Leu	Gln	Ala	Phe	Leu
1				5					10				15		
Gln	Asp	Arg	Thr	Pro	Ser	Ala	Ser	Pro	Asp	Leu	Gly	Lys	His	Ser	Pro
		20					25						30		
Leu	Ala	Leu	Leu	Ala	Ala	Thr	Cys	Ser	Arg	Ile	Gly	Gln	Pro	Gly	Ala
		35				40						45			

Ala 50 Ala Pro Pro Asp Phe Leu Gln Val Pro Tyr Asp Pro Ala Leu Gly
 Ser 65 Pro Ser Arg Leu Phe 70 His Pro Trp Thr Ala 75 Asp Met Pro Ala His
 Ser Pro Gly Ala Leu 85 Pro Pro Pro His Pro 90 Ser Leu Gly Leu Thr 95 Pro
 Gln Lys Thr His 100 Leu Gln Pro Ser Phe 105 Gly Ala Ala His Glu 110 Leu Pro
 Leu Thr Pro 115 Pro Ala Asp Pro Ser Tyr 120 Pro Tyr Glu Phe 125 Ser Pro Val
 Lys Met 130 Leu Pro Ser Ser Met 135 Ala Ala Leu Pro Ala 140 Ser Cys Ala Pro
 Ala Tyr Val Pro Tyr Ala 150 Gln Ala Ala Leu Pro Pro Gly Tyr Ser
 145 Asn Leu Leu Pro Pro 165 Pro Pro Pro Pro 170 Pro Pro Thr Cys Arg
 Gln Leu Ser Pro 180 Asn Pro Ala Pro Asp 185 Asp Leu Pro Trp Trp 190 Ser Ile
 Pro Gln Ala Gly Ala Gly Pro Gly 200 Ala Ser Gly Val Pro Gly Ser Gly
 Leu Ser 210 Gly Ala Cys Ala Gly 215 Ala Pro His Ala Pro Arg Phe Pro Ala
 Ser 225 Ala Ala Ala Ala Ala 230 Ala Ala Ala Ala Ala 235 Leu Gln Arg Gly Leu
 Val Leu Gly Pro Ser 245 Asp Phe Ala Gln Tyr 250 Gln Ser Gln Ile Ala Ala
 Leu Leu Gln Thr 260 Lys Ala Pro Leu Ala 265 Ala Thr Ala Arg Arg 270 Cys Arg
 Arg Cys Arg 275 Cys Pro Asn Cys Gln 280 Ala Ala Gly Gly Ala 285 Pro Glu Ala
 Glu Pro 290 Gly Lys Lys Lys Gln 295 His Val Cys His Val Pro Gly Cys Gly
 Lys 305 Val Tyr Gly Lys Thr 310 Ser His Leu Lys Ala 315 His Leu Arg Trp His
 Thr Gly Glu Arg Pro 325 Phe Val Cys Asn Trp 330 Leu Phe Cys Gly Lys 335 Ser
 Phe Thr Arg Ser 340 Asp Glu Leu Gln Arg His Leu Arg Thr His Thr Gly
 Glu Lys Arg 355 Phe Ala Cys Pro Glu 360 Cys Gly Lys Arg Phe 365 Met Arg Ser
 Asp His 370 Leu Ala Lys His Val 375 Lys Thr His Gln Asn 380 Lys Lys Leu Lys
 Val Ala Glu Ala Gly Val 390 Lys Arg Glu Asp Ala 395 Arg Asp Leu

<210> 75
 <211> 514
 <212> PRT
 <213> homo sapiens
 <400> 75

Met Gly Lys Asp Phe Arg Tyr Tyr Phe Gln His Pro Trp Ser Arg Met
 1 Ile Val Ala Tyr 5 Leu Val Ile Phe Phe 10 Asn Phe Leu Ile Phe Ala Glu
 Asp Pro Val Ser His Ser Gln Thr Glu Ala Asn Val Ile Val Val Gly
 35 Asn Cys Phe Ser Phe Val Thr 40 Lys Tyr Pro Arg Gly Val Gly Trp
 50 Arg Ile Leu Lys Val Leu 55 Leu Trp Leu Leu Ala 60 Ile Leu Thr Gly Leu
 65 Ile Ala Gly Lys Phe 70 Leu Phe His Gln Arg 75 Leu Phe Gly Gln Leu Leu
 Arg Leu Lys Met 85 Phe Arg Glu Asp His 90 Gly Ser Trp Met Thr Met Phe
 Phe Ser Thr Ile Leu Phe Leu Phe Ile Phe Ser His Ile Tyr Asn Thr

Ile	Leu	115	Leu	Met	Asp	Gly	Asn	120	Met	Gly	Ala	Tyr	Ile	125	Ile	Thr	Asp	Tyr
Met	130	Gly	Ile	Arg	Asn	Glu	135	Ser	Phe	Met	Lys	Leu	140	Ala	Ala	Val	Gly	Thr
145	Trp	Met	Gly	Asp	Phe	Val	150	Thr	Ala	Trp	Met	Val	155	Thr	Asp	Met	Met	Leu
Gln	Asp	Lys	Pro	Tyr	Pro	Asp	Trp	Gly	165	Lys	Ser	Ala	170	Arg	Ala	Phe	Trp	
Lys	Lys	Gly	180	Val	Arg	Ile	Thr	185	Leu	Phe	Trp	Thr	190	Val	Leu	Phe	Thr	
Leu	Thr	Ser	195	Val	Val	Val	Leu	200	Val	Ile	Thr	Thr	205	Asp	Trp	Ile	Ser	Trp
Asp	Lys	Leu	210	Asn	Arg	Gly	215	Phe	Leu	Pro	Ser	Asp	220	Glu	Val	Ser	Arg	Ala
225	Phe	Leu	Ala	Ser	Phe	230	Ile	Leu	Val	Phe	Asp	235	Leu	Leu	Ile	Val	Met	Gln
Asp	Trp	Glu	240	Phe	Pro	His	Phe	Met	Gly	245	Asp	Val	250	Asp	Val	Asn	Leu	Pro
Gly	Leu	His	255	Thr	Pro	His	Met	Gln	260	Phe	Lys	Ile	265	Pro	Phe	Phe	Gln	Lys
Ile	Phe	Lys	270	Glu	Glu	Tyr	Arg	275	Ile	His	Ile	Thr	280	Gly	Lys	Trp	Phe	Asn
Tyr	Gly	Ile	285	Ile	Phe	Leu	Val	290	Leu	Ile	Leu	Asp	295	Leu	Asn	Met	Trp	Lys
300	Asn	Gln	Ile	Phe	Tyr	Lys	Pro	305	Glu	Tyr	Gly	Gln	310	Tyr	Ile	Gly	Pro	
Gly	Gln	Lys	315	Ile	Thr	Val	Lys	320	Asp	Ser	Glu	Ser	325	Leu	Lys	Asp	Leu	
Asn	Arg	Thr	330	Lys	Leu	Ser	Trp	335	Glu	Trp	Arg	Ser	340	Asn	His	Thr	Asn	Pro
Arg	Thr	Asn	345	Lys	Thr	Tyr	Val	350	Glu	Gly	Asp	Met	355	Phe	Leu	His	Ser	Arg
Phe	Ile	Gly	360	Ala	Ser	Leu	Asp	365	Val	Lys	Cys	Leu	370	Ala	Phe	Val	Pro	Ser
375	Leu	Ile	Ala	Phe	Val	Trp	Phe	380	Gly	Phe	Phe	Ile	385	Trp	Phe	Phe	Gly	Arg
Leu	Ile	Ala	390	Glu	Pro	Arg	Met	395	Glu	Asn	Gln	Asp	400	Lys	Thr	Tyr	Thr	
Phe	Leu	Lys	405	Arg	Lys	Ser	Pro	410	Glu	His	Ser	Lys	415	Asp	Met	Gly	Ile	
Arg	Met	Lys	420	Asn	Thr	Gln	Ala	425	Val	Glu	Asp	Pro	430	Leu	Asn	Asp	Pro	
Thr	Arg	Glu	435	Thr	Gln	Ala	Ser	440	Val	Glu	Asp	Pro	445	Leu	Asn	Asp	Pro	
Ser	Leu	Val	450	Cys	Ile	Arg	Ser	455	Val	Glu	Asp	Pro	460	Leu	Asn	Asp	Pro	
465	Ser	His	Leu	Thr	Ser	Glu	Asn	465	Val	Glu	Ile	Val	470	Tyr	Lys	Ser		
Ser	His	Leu	475	Thr	Ser	Glu	Asn	480	Val	Glu	Ile	Val	485	Tyr	Lys	Ser		
Ser	Ala	Thr	485	Glu	Ala	Asp	Gln	490	Thr	Thr	Ser	Lys	495	Ser	Thr	Pro		
Thr	Asn		500					505					510					

<210> 76
 <211> 316
 <212> PRT
 <213> homo sapiens
 <400> 76

Met	Leu	Ala	Asn	Gln	Ala	Ser	Ala	Glu	Glu	Arg	Phe	Leu	Leu	Leu	Gly
1	Phe	Ser	Asp	Trp	Pro	Ser	Leu	Gln	Pro	Val	Leu	Phe	Ala	Leu	Val
Leu	Cys	Tyr	20	Leu	Thr	Leu	Thr	25	Gly	Asn	Ser	Ala	Leu	Val	Leu
Ala	Val	35	Arg	Asp	Pro	Arg	Leu	40	His	Thr	Pro	Met	Tyr	45	Phe
50							55						60		

His 65	Leu	Ala	Leu	Val	Asp 70	Ala	Gly	Phe	Thr	Thr 75	Ser	Val	Val	Pro	Pro 80
Leu	Leu	Ala	Asn 85	Leu	Arg	Gly	Pro	Ala	Leu 90	Trp	Leu	Pro	Arg	Ser 95	His
Cys	Thr	Ala	Gln 100	Leu	Cys	Ala	Ser	Leu 105	Ala	Leu	Gly	Ser	Ala 110	Glu	Cys
Val	Leu 115	Leu	Ala	Val	Met	Ala	Leu 120	Asp	Arg	Ala	Ala	Ala 125	Val	Cys	Arg
Pro	Leu 130	Arg	Tyr	Ala	Gly	Leu 135	Val	Ser	Pro	Arg	Leu 140	Cys	Arg	Thr	Leu
Ala 145	Ser	Ala	Ser	Trp	Leu 150	Ser	Gly	Leu	Thr	Asn 155	Ser	Val	Ala	Gln	Thr 160
Ala	Leu	Leu	Ala	Glu 165	Arg	Pro	Leu	Cys	Ala 170	Pro	Arg	Leu	Leu	Asp 175	His
Phe	Ile	Cys	Glu 180	Leu	Pro	Ala	Leu 185	Lys	Leu	Ala	Cys	Gly 190	Gly	Asp	
Gly	Asp	Thr 195	Thr	Glu	Asn	Gln	Met 200	Phe	Ala	Ala	Arg	Val 205	Val	Ile	Leu
Leu 210	Leu	Pro	Phe	Ala	Val	Ile 215	Leu	Ala	Ser	Tyr	Gly 220	Ala	Val	Ala	Arg
Ala 225	Val	Cys	Cys	Met	Arg 230	Phe	Ser	Gly	Gly	Arg 235	Arg	Arg	Ala	Val	Gly 240
Thr	Cys	Gly	Ser	His 245	Leu	Thr	Ala	Val	Cys 250	Leu	Phe	Tyr	Gly	Ser 255	Ala
Ile	Tyr	Thr	Tyr 260	Leu	Gln	Pro	Ala	Gln 265	Arg	Tyr	Asn	Gln	Ala 270	Arg	Gly
Lys	Phe	Val 275	Ser	Leu	Phe	Tyr	Thr 280	Val	Val	Thr	Pro	Ala 285	Leu	Asn	Pro
Leu 290	Ile	Tyr	Thr	Leu	Arg	Asn 295	Lys	Lys	Val	Lys	Gly 300	Ala	Ala	Arg	Arg
Leu 305	Leu	Arg	Ser	Leu	Gly 310	Arg	Gly	Gln	Ala	Gly 315	Gln				

<210> 77
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 <400> 77

Met 1	Ser	Val	Phe 5	Leu	Gly	Pro	Gly	Met 10	Pro	Ser	Ala	Ser	Leu 15	Leu	Val
Asn	Leu	Leu	Ser 20	Ala	Leu	Leu	Ile 25	Leu	Phe	Val	Phe	Gly 30	Glu	Thr	Glu
Ile	Arg	Phe 35	Thr	Gly	Gln	Thr	Glu 40	Phe	Val	Val	Asn 45	Glu	Thr	Ser	Thr
Thr 50	Val	Ile	Arg	Leu	Ile 55	Ile	Glu	Arg	Ile	Gly 60	Glu	Pro	Ala	Asn	Val
Thr 65	Ala	Ile	Val	Ser 70	Leu	Tyr	Gly	Glu	Asp 75	Ala	Gly	Asp	Phe	Phe	Asp 80
Thr	Tyr	Ala	Ala 85	Ala	Phe	Ile	Pro	Ala 90	Gly	Glu	Thr	Asn 95	Arg	Thr	Val
Tyr	Ile	Ala	Val 100	Cys	Asp	Asp	Asp 105	Leu	Pro	Gly	Pro	Asp 110	Glu	Thr	Phe
Ile	Phe	His 115	Leu	Thr	Leu	Gln	Lys 120	Pro	Ser	Ala	Asn 125	Val	Lys	Leu	Gly
Trp	Pro 130	Arg	Thr	Val	Thr 135	Val	Thr	Ile	Leu	Ser	Asn 140	Asp	Asn	Ala	Phe
Gly 145	Ile	Ile	Ser	Phe 150	Asn	Met	Leu	Pro	Ser	Ile 155	Ala	Val	Ser	Glu	Pro 160
Lys	Gly	Arg	Asn 165	Glu	Ser	Met	Pro	Leu 170	Thr	Leu	Ile	Arg	Glu	Lys 175	Gly
Thr	Tyr	Gly 180	Met	Val	Met	Val	Thr 185	Phe	Glu	Val	Glu	Gly 190	Gly	Pro	Asn
Pro	Pro	Asp 195	Glu	Asp	Leu	Ser	Pro 200	Val	Lys	Gly	Asn 205	Ile	Thr	Phe	Pro
Pro	Gly	Arg	Ala	Thr	Val	Ile	Tyr	Asn	Leu	Ala	Val	Leu	Asp	Asp	Glu

210	Val	Pro	Glu	Asn	Asp	Glu	Ile	Phe	Leu	Ile	Gln	Leu	Lys	Ser	Val	Glu
225	Gly	Gly	Ala	Glu	Ile	230	Asn	Thr	Ser	Arg	235	Ser	Ile	Glu	Ile	240
					245						250					255
	Glu	Lys	Asn	Asp	Ser	Pro	Val	Arg	Phe	Leu	Gln	Ser	Ile	Tyr	Leu	Val
	Pro	Glu	Glu	Asp	His	Ile	Leu	Ile	Ile	Pro	Val	Val	Arg	Gly	Lys	Asp
	Asn	Asn	Gly	Asn	Leu	Ile	Gly	Ser	Asp	Glu	Tyr	Glu	Val	Ser	Ile	Ser
	Tyr	Ala	Val	Thr	Thr	Gly	Asn	Ser	Thr	Ala	His	Ala	Gln	Gln	Asn	Leu
305	Asp	Phe	Ile	Asp	Leu	Gln	Pro	Asn	Thr	Thr	Val	Val	Phe	Pro	Pro	Phe
					325											335
	Ile	His	Glu	Ser	His	Leu	Lys	Phe	Gln	Ile	Val	Asp	Asp	Thr	Ile	Pro
	Glu	Ile	Ala	Glu	Ser	Phe	His	Ile	Met	Leu	Leu	Lys	Asp	Thr	Leu	Gln
	Gly	Asp	Ala	Val	Leu	Ile	Ser	Pro	Ser	Val	Val	Gln	Val	Thr	Ile	Lys
	Pro	Asn	Asp	Lys	Pro	Tyr	Gly	Val	Leu	Ser	Phe	Asn	Ser	Val	Leu	Phe
385	Glu	Arg	Thr	Val	Ile	Ile	Asp	Glu	Asp	Arg	Ile	Ser	Arg	Tyr	Glu	Glu
					405											415
	Ile	Thr	Val	Val	Arg	Asn	Gly	Gly	Thr	His	Gly	Asn	Val	Ser	Ala	Asn
	Trp	Val	Val	Thr	Pro	Asn	Ser	Thr	Asp	Pro	Ser	Pro	Val	Thr	Ala	Asp
					435											445
	Ile	Arg	Pro	Ser	Ser	Gly	Val	Leu	His	Phe	Ala	Gln	Gly	Gln	Met	Leu
	Ala	Thr	Ile	Pro	Leu	Thr	Gly	Gly	Asp	Asp	Asp	Leu	Pro	Glu	Glu	Ala
465	Glu	Ala	Tyr	Leu	Leu	Gln	Ile	Leu	Pro	His	Thr	Ile	Arg	Gly	Gly	Ala
					485											495
	Glu	Val	Ser	Glu	Pro	Ala	Glu	Leu	Leu	Phe	Tyr	Ile	Gln	Asp	Ser	Asp
	Asp	Val	Tyr	Gly	Leu	Ile	Thr	Phe	Phe	Pro	Met	Glu	Asn	Gln	Lys	Ile
					500											510
	Glu	Ser	Ser	Pro	Gly	Gly	Arg	Tyr	Leu	Ser	Leu	Ser	Phe	Thr	Arg	Leu
	Gly	Gly	Thr	Lys	Gly	Asp	Val	Arg	Leu	Leu	Tyr	Ser	Val	Leu	Tyr	Ile
545	Pro	Ala	Gly	Ala	Val	Asp	Pro	Leu	Gln	Ala	Lys	Glu	Gly	Ile	Leu	Asn
					565											575
	Ile	Ser	Arg	Arg	Asn	Asp	Leu	Ile	Phe	Pro	Glu	Gln	Lys	Thr	Gln	Val
	Thr	Thr	Lys	Leu	Pro	Ile	Arg	Asn	Asp	Ala	Phe	Leu	Gln	Asn	Gly	Ala
					580											590
	His	Phe	Leu	Val	Gln	Leu	Glu	Thr	Val	Glu	Leu	Leu	Asn	Ile	Ile	Pro
	Leu	Ile	Pro	Pro	Ile	Ser	Pro	Arg	Phe	Gly	Glu	Ile	Cys	Asn	Ile	Ser
625	Leu	Leu	Val	Thr	Pro	Ala	Ile	Ala	Asn	Gly	Glu	Ile	Gly	Phe	Leu	Ser
					645											655
	Asn	Leu	Pro	Ile	Leu	His	Glu	Pro	Gly	Thr	Asp	Phe	Ala	Ala	Glu	Val
	Val	Tyr	Ile	Pro	Leu	His	Arg	Asp	Gly	Thr	Asp	Gly	Gln	Ala	Thr	Val
					660											670
	Tyr	Trp	Ser	Leu	Lys	Pro	Ser	Gly	Phe	Asn	Ser	Lys	Ala	Val	Thr	Pro
					675											685
	Asp	Asp	Ile	Gly	Pro	Phe	Asn	Gly	Ser	Val	Leu	Phe	Leu	Ser	Gly	Gln
705	Ser	Asp	Thr	Thr	Ile	Asn	Ile	Thr	Ile	Lys	Gly	Asp	Asp	Ile	Pro	Glu
					710											720

Met	Asn	Glu	Thr	Val	Thr	Leu	Ser	Leu	Asp	Trp	Val	Asn	Val	Glu	Asn
Gln	Val	Leu	Lys	Ser	Gly	Tyr	Thr	Ser	Arg	Asp	Leu	Ile	Ile	Leu	Glu
Asn	Asp	Asp	Pro	Gly	Gly	Val	Phe	Glu	Phe	Ser	Pro	Ala	Ser	Arg	Gly
Pro	Tyr	Val	Ile	Lys	Glu	Gly	Glu	Ser	Val	Glu	Leu	His	Ile	Ile	Arg
Ser	Arg	Gly	Ser	Leu	Val	Lys	Gln	Phe	Leu	His	Tyr	Arg	Val	Glu	Pro
Arg	Asp	Ser	Asn	Glu	Phe	Tyr	Gly	Asn	Thr	Gly	Val	Leu	Glu	Phe	Lys
Pro	Gly	Glu	Arg	Glu	Ile	Val	Ile	Thr	Leu	Leu	Ala	Arg	Leu	Asp	Gly
Ile	Pro	Glu	Leu	Asp	Glu	His	Tyr	Trp	Val	Val	Leu	Ser	Ser	His	Gly
Glu	Arg	Glu	Ser	Lys	Leu	Gly	Ser	Ala	Thr	Ile	Val	Asn	Ile	Thr	Ile
Leu	Lys	Asn	Asp	Asp	Pro	His	Gly	Ile	Ile	Glu	Phe	Val	Ser	Asp	Gly
Leu	Ile	Val	Met	Ile	Asn	Glu	Ser	Lys	Gly	Asp	Ala	Ile	Tyr	Ser	Ala
Val	Tyr	Asp	Val	Val	Arg	Asn	Arg	Gly	Asn	Phe	Gly	Asp	Val	Ser	Val
Ser	Trp	Val	Val	Ser	Pro	Asp	Phe	Thr	Gln	Asp	Val	Phe	Pro	Val	Gln
Gly	Thr	Val	Val	Phe	Gly	Asp	Gln	Glu	Phe	Ser	Lys	Asn	Ile	Thr	Ile
Tyr	Ser	Leu	Pro	Asp	Glu	Ile	Pro	Glu	Glu	Met	Glu	Glu	Phe	Thr	Val
Ile	Leu	Leu	Asn	Gly	Thr	Gly	Gly	Ala	Lys	Val	Gly	Asn	Arg	Thr	Thr
Ala	Thr	Leu	Arg	Ile	Arg	Arg	Asn	Asp	Asp	Pro	Ile	Tyr	Phe	Ala	Glu
Pro	Arg	Val	Val	Arg	Val	Gln	Glu	Gly	Glu	Thr	Ala	Asn	Phe	Thr	
Val	Leu	Arg	Asn	Gly	Ser	Val	Asp	Val	Thr	Cys	Met	Val	Gln	Tyr	
Ala	Thr	Lys	Asp	Gly	Lys	Ala	Thr	Ala	Arg	Glu	Arg	Asp	Phe	Ile	
Pro	Val	Glu	Lys	Gly	Glu	Thr	Leu	Ile	Phe	Glu	Val	Gly	Ser	Arg	
Gln	Gln	Ser	Ile	Ser	Ile	Phe	Val	Asn	Glu	Asp	Gly	Ile	Pro	Glu	
Thr	Asp	Glu	Pro	Phe	Tyr	Ile	Ile	Leu	Leu	Asn	Ser	Pro	Gly	Asp	
Pro	Val	Val	Tyr	Gln	Tyr	Gly	Val	Ala	Thr	Val	Ile	Ile	Glu	Ala	
Asn	Asp	Asp	Pro	Asn	Gly	Ile	Phe	Ser	Leu	Glu	Pro	Ile	Asp	Lys	
Ala	Val	Glu	Glu	Gly	Lys	Thr	Asn	Ala	Phe	Trp	Ile	Leu	Arg	His	
Arg	Gly	Tyr	Phe	Gly	Ser	Val	Ser	Val	Ser	Trp	Gln	Leu	Phe	Gln	
Asn	Asp	Ser	Ala	Leu	Gln	Pro	Gly	Gln	Glu	Phe	Tyr	Glu	Thr	Ser	
Gly	Thr	Val	Asn	Phe	Met	Asp	Gly	Glu	Glu	Ala	Lys	Pro	Ile	Ile	
Leu	His	Ala	Phe	Pro	Asp	Lys	Ile	Pro	Glu	Phe	Asn	Glu	Phe	Tyr	
Phe	Leu	Lys	Leu	Val	Asn	Ile	Ser	Gly	Gly	Ser	Pro	Gly	Pro	Gly	
Gly	Gln	Leu	Ala	Glu	Thr	Asn	Leu	Gln	Val	Thr	Val	Met	Ala	Pro	

1220	Phe Asn Asp Asp Pro Phe	1225	Gly Val Phe Ile Leu	1230	Asp Pro Glu Cys
1235	Leu Glu Arg Glu Val Ala	1240	Glu Asp Val Leu Ser	1245	Glu Asp Asp Met
1250	Ser Tyr Ile Thr Asn Phe	1255	Thr Ile Leu Arg Gln	1260	Gln Gly Val Phe
1265	Gly Asp Val Gln Leu Gly	1270	Trp Glu Ile Leu Ser	1275	Ser Glu Phe Pro
1280	Ala Gly Leu Pro Pro Met	1285	Ile Asp Phe Leu Leu	1290	Val Gly Ile Phe
1295	Pro Thr Thr Val His Leu	1300	Gln Gln His Met Arg	1305	Gly His His Ser
1310	Gly Thr Asp Ala Leu Tyr	1315	Phe Thr Gly Leu Glu	1320	Gly Ala Phe Gly
1325	Thr Gly Asn Ser Lys Tyr	1330	His Pro Phe Arg Asn	1335	Asn Thr Ile Ala
1340	Asn Phe Thr Phe Ser Ala	1345	Trp Val Met Pro Asn	1350	Ala Asn Thr Asn
1355	Gly Phe Ile Ile Ala Lys	1360	Asp Asp Gly Asn Gly	1365	Ser Ile Tyr Tyr
1370	Gly Val Lys Ile Gln Thr	1375	Asn Glu Ser His Val	1380	Thr Leu Ser Leu
1385	His Tyr Lys Thr Leu Gly	1390	Ser Asn Ala Thr Tyr	1395	Ile Ala Lys Thr
1400	Thr Val Met Lys Tyr Leu	1405	Glu Glu Ser Val Trp	1410	Leu His Leu Leu
1415	Ile Ile Leu Glu Asp Gly	1420	Ile Ile Glu Phe Tyr	1425	Leu Asp Gly Asn
1430	Ala Met Pro Arg Gly Ile	1435	Lys Ser Leu Lys Gly	1440	Glu Ala Ile Thr
1445	Asp Gly Pro Gly Ile Leu	1450	Arg Ile Gly Ala Gly	1455	Ile Asn Gly Asn
1460	Asp Arg Phe Thr Gly Leu	1465	Met Gln Asp Val Arg	1470	Ser Tyr Glu Arg
1475	Lys Leu Thr Leu Glu Glu	1480	Ile Tyr Glu Leu His	1485	Ala Met Pro Ala
1490	Lys Ser Asp Leu His Pro	1495	Ile Ser Gly Tyr Leu	1500	Glu Phe Arg Gln
1505	Gly Glu Thr Asn Lys Ser	1510	Phe Ile Ile Ser Ala	1515	Arg Asp Asp Asn
1520	Asp Glu Glu Gly Glu Glu	1525	Leu Phe Ile Leu Lys	1530	Leu Val Ser Val
1535	Tyr Gly Gly Ala Arg Ile	1540	Ser Glu Glu Asn Thr	1545	Thr Ala Arg Leu
1550	Thr Ile Gln Lys Ser Asp	1555	Asn Ala Asn Gly Leu	1560	Phe Gly Phe Thr
1565	Gly Ala Cys Ile Pro Glu	1570	Ile Ala Glu Glu Gly	1575	Ser Thr Ile Ser
1580	Cys Val Val Glu Arg Thr	1585	Arg Gly Ala Leu Asp	1590	Tyr Val His Val
1595	Phe Tyr Thr Ile Ser Gln	1600	Ile Glu Thr Asp Gly	1605	Ile Asn Tyr Leu
1610	Val Asp Asp Phe Ala Asn	1615	Ala Ser Gly Thr Ile	1620	Thr Phe Leu Pro
1625	Trp Gln Arg Ser Glu Val	1630	Leu Asn Ile Tyr Val	1635	Leu Asp Asp Asp
1640	Ile Pro Glu Leu Asn Glu	1645	Tyr Phe Arg Val Thr	1650	Leu Val Ser Ala
1655	Ile Pro Gly Asp Gly Lys	1660	Leu Gly Ser Thr Pro	1665	Thr Ser Gly Ala
1670	Ser Ile Asp Pro Glu Lys	1675	Glu Thr Thr Asp Ile	1680	Thr Ile Lys Ala
1685	Ser Asp His Pro Tyr Gly	1690	Leu Leu Gln Phe Ser	1695	Thr Gly Leu Pro

1700	Pro Gln	Pro Lys Asp Ala	1705	Met Thr Leu Pro Ala	1710	Ser Ser Val Pro
1715	His Ile	Thr Val Glu Glu	1720	Glu Asp Gly Glu Ile	1725	Arg Leu Leu Val
1730	Ile Arg	Ala Gln Gly Leu	1735	Leu Gly Arg Val Thr	1740	Ala Glu Phe Arg
1745	Thr Val	Ser Leu Thr Ala	1750	Phe Ser Pro Glu Asp	1755	Tyr Gln Asn Val
1760	Ala Gly	Thr Leu Glu Phe	1765	Gln Pro Gly Glu Arg	1770	Tyr Lys Tyr Ile
1775	Phe Ile	Asn Ile Thr Asp	1780	Asn Ser Ile Pro Glu	1785	Leu Glu Lys Ser
1790	Phe Lys	Val Glu Leu Leu	1795	Asn Leu Glu Gly Gly	1800	Val Ala Glu Leu
1805	Phe Arg	Val Asp Gly Ser	1810	Gly Ser Gly Asp Gly	1815	Asp Met Glu Phe
1820	Phe Leu	Pro Thr Ile His	1825	Lys Arg Ala Ser Leu	1830	Gly Val Ala Ser
1835	Gln Ile	Leu Val Thr Ile	1840	Ala Ala Ser Asp His	1845	Ala His Gly Val
1850	Phe Glu	Phe Ser Pro Glu	1855	Ser Leu Phe Val Ser	1860	Gly Thr Glu Pro
1865	Glu Asp	Gly Tyr Ser Thr	1870	Val Thr Leu Asn Val	1875	Ile Arg His His
1880	Gly Thr	Leu Ser Pro Val	1885	Thr Leu His Trp Asn	1890	Ile Asp Ser Asp
1895	Pro Asp	Gly Asp Leu Ala	1900	Phe Thr Ser Gly Asn	1905	Ile Thr Phe Glu
1910	Ile Gly	Gln Thr Ser Ala	1915	Asn Ile Thr Val Glu	1920	Ile Leu Pro Asp
1925	Glu Asp	Pro Glu Leu Asp	1930	Lys Ala Phe Ser Val	1935	Ser Val Leu Ser
1940	Val Ser	Ser Gly Ser Leu	1945	Gly Ala His Ile Asn	1950	Ala Thr Leu Thr
1955	Val Leu	Ala Ser Asp Asp	1960	Pro Tyr Gly Ile Phe	1965	Ile Phe Ser Glu
1970	Lys Asn	Arg Pro Val Lys	1975	Val Glu Glu Ala Thr	1980	Gln Asn Ile Thr
1985	Leu Ser	Ile Ile Arg Leu	1990	Lys Gly Leu Met Gly	1995	Lys Val Leu Val
2000	Ser Tyr	Ala Thr Leu Asp	2005	Asp Met Glu Lys Pro	2010	Pro Tyr Phe Pro
2015	Pro Asn	Leu Ala Arg Ala	2020	Thr Gln Gly Arg Asp	2025	Tyr Ile Pro Ala
2030	Ser Gly	Phe Ala Leu Phe	2035	Gly Ala Asn Gln Ser	2040	Glu Ala Thr Ile
2045	Ala Ile	Ser Ile Leu Asp	2050	Asp Asp Glu Pro Glu	2055	Arg Ser Glu Ser
2060	Val Phe	Ile Glu Leu Leu	2065	Asn Ser Thr Leu Val	2070	Ala Lys Val Gln
2075	Ser Arg	Ser Ile Pro Asn	2080	Ser Pro Arg Leu Gly	2085	Pro Lys Val Glu
2090	Thr Ile	Ala Gln Leu Ile	2095	Ile Ile Ala Asn Asp	2100	Asp Ala Phe Gly
2105	Thr Leu	Gln Leu Ser Ala	2110	Pro Ile Val Arg Val	2115	Ala Glu Asn His
2120	Val Gly	Pro Ile Ile Asn	2125	Val Thr Arg Thr Gly	2130	Gly Ala Phe Ala
2135	Asp Val	Ser Val Lys Phe	2140	Lys Ala Val Pro Ile	2145	Thr Ala Ile Ala
2150	Gly Glu	Asp Tyr Ser Ile	2155	Ala Ser Ser Asp Val	2160	Val Leu Leu Glu
2165	Gly Glu	Thr Ser Lys Ala	2170	Val Pro Ile Tyr Val	2175	Ile Asn Asp Ile

2180	Tyr Pro	Glu Leu Glu Glu	2185	Ser Phe	Leu Val Gln	2190	Leu Met	Asn Glu
2195	Thr Thr	Gly Gly Ala Arg	2200	Leu Gly	Ala Leu Thr	2205	Glu Ala	Val Ile
2210	Ile Ile	Glu Ala Ser Asp	2215	Asp Pro	Tyr Gly Leu	2220	Phe Gly	Phe Gln
2225	Ile Thr	Lys Leu Ile Val	2230	Glu Glu	Pro Glu Phe	2235	Asn Ser	Val Lys
2240	Val Asn	Leu Pro Ile Ile	2245	Asn Asn	Ser Gly Thr	2250	Leu Gly	Asn Val
2255	Thr Val	Gln Trp Val Ala	2260	Ile Ile	Asn Gly Gln	2265	Leu Ala	Thr Gly
2270	Asp Leu	Arg Val Val Ser	2275	Gly Asn	Val Thr Phe	2280	Ala Pro	Gly Glu
2285	Thr Ile	Gln Thr Leu Leu	2290	Glu Glu	Val Leu Ala	2295	Asp Asp	Val Pro
2300	Glu Ile	Glu Glu Val Ile	2305	Gln Val	Gln Leu Thr	2310	Asp Ala	Ser Gly
2315	Gly Gly	Thr Ile Gly Leu	2320	Asp Arg	Ile Ala Asn	2325	Ile Ile	Ile Pro
2330	Ala Asn	Asp Asp Pro Tyr	2335	Gly Thr	Val Ala Phe	2340	Ala Gln	Met Val
2345	Tyr Arg	Val Gln Glu Pro	2350	Leu Glu	Arg Ser Ser	2355	Cys Ala	Asn Ile
2360	Thr Val	Arg Arg Ser Gly	2365	Gly His	Phe Gly Arg	2370	Leu Leu	Leu Phe
2375	Tyr Ser	Thr Ser Asp Ile	2380	Asp Val	Val Ala Leu	2385	Ala Met	Glu Glu
2390	Gly Gln	Asp Leu Leu Ser	2395	Tyr Tyr	Glu Ser Pro	2400	Ile Gln	Gly Val
2405	Pro Asp	Pro Leu Trp Arg	2410	Thr Trp	Met Asn Val	2415	Ser Ala	Val Gly
2420	Glu Pro	Leu Tyr Thr Cys	2425	Ala Thr	Leu Cys Leu	2430	Lys Glu	Gln Ala
2435	Cys Ser	Ala Phe Ser Phe	2440	Phe Ser	Ala Ser Glu	2445	Gly Pro	Gln Cys
2450	Phe Trp	Met Thr Ser Trp	2455	Ile Ser	Pro Ala Val	2460	Asn Asn	Ser Asp
2465	Phe Trp	Thr Tyr Arg Lys	2470	Asn Met	Thr Arg Val	2475	Ala Ser	Leu Phe
2480	Ser Gly	Gln Ala Val Ala	2485	Gly Ser	Asp Tyr Glu	2490	Pro Val	Thr Arg
2495	Gln Trp	Ala Ile Met Gln	2500	Glu Gly	Asp Glu Phe	2505	Ala Asn	Leu Thr
2510	Val Ser	Ile Leu Pro Asp	2515	Asp Phe	Pro Glu Met	2520	Asp Glu	Ser Phe
2525	Leu Ile	Ser Leu Leu Glu	2530	Val His	Leu Met Asn	2535	Ile Ser	Ala Ser
2540	Leu Lys	Asn Gln Pro Thr	2545	Ile Gly	Gln Pro Asn	2550	Ile Ser	Thr Val
2555	Val Ile	Ala Leu Asn Gly	2560	Asp Ala	Phe Gly Val	2565	Phe Val	Ile Tyr
2570	Asn Ile	Ser Pro Asn Thr	2575	Ser Glu	Asp Gly Leu	2580	Phe Val	Glu Val
2585	Gln Glu	Gln Pro Gln Thr	2590	Leu Val	Glu Leu Met	2595	Ile His	Arg Thr
2600	Gly Gly	Ser Leu Gly Gln	2605	Val Ala	Val Glu Trp	2610	Arg Val	Val Gly
2615	Gly Thr	Ala Thr Glu Gly	2620	Leu Asp	Phe Ile Gly	2625	Ala Gly	Glu Ile
2630	Leu Thr	Phe Ala Glu Gly	2635	Glu Thr	Lys Lys Thr	2640	Val Ile	Leu Thr
2645	Ile Leu	Asp Asp Ser Glu	2650	Pro Glu	Asp Asp Glu	2655	Ser Ile	Ile Val

2660	Ser Leu	Val Tyr Thr Glu	2665	Gly Gly	Ser Arg Ile	2670	Leu Pro	Ser Ser
2675	Asp Thr	Val Arg Val Asn	2680	Ile Leu	Ala Asn Asp	2685	Asn Val	Ala Gly
2690	Ile Val	Ser Phe Gln Thr	2695	Ala Ser	Arg Ser Val	2700	Ile Gly	His Glu
2705	Gly Glu	Ile Leu Gln Phe	2710	His Val	Ile Arg Thr	2715	Phe Pro	Gly Arg
2720	Gly Asn	Val Thr Val Asn	2725	Trp Lys	Ile Ile Gly	2730	Gln Asn	Leu Glu
2735	Leu Asn	Phe Ala Asn Phe	2740	Ser Gly	Gln Leu Phe	2745	Phe Pro	Glu Gly
2750	Ser Leu	Asn Thr Thr Leu	2755	Phe Val	His Leu Leu	2760	Asp Asp	Asn Ile
2765	Pro Glu	Glu Lys Glu Val	2770	Tyr Gln	Val Ile Leu	2775	Tyr Asp	Val Arg
2780	Thr Gln	Gly Val Pro Pro	2785	Ala Gly	Ile Ala Leu	2790	Leu Asp	Ala Gln
2795	Gly Tyr	Ala Ala Val Leu	2800	Thr Val	Glu Ala Ser	2805	Asp Glu	Pro His
2810	Gly Val	Leu Asn Phe Ala	2815	Leu Ser	Ser Arg Phe	2820	Val Leu	Leu Gln
2825	Glu Ala	Asn Ile Thr Ile	2830	Gln Leu	Phe Ile Asn	2835	Arg Glu	Phe Gly
2840	Ser Leu	Gly Ala Ile Asn	2845	Val Thr	Tyr Thr Thr	2850	Val Pro	Gly Met
2855	Leu Ser	Leu Lys Asn Gln	2860	Val Gly	Asn Leu Ala	2865	Glu Pro	Glu Glu
2870	Val Asp	Phe Val Pro Ile	2875	Ile Gly	Phe Leu Ile	2880	Leu Glu	Glu Gly
2885	Glu Thr	Ala Ala Ala Ile	2890	Asn Ile	Thr Ile Leu	2895	Glu Asp	Asp Val
2900	Pro Glu	Leu Glu Glu Tyr	2905	Phe Leu	Val Asn Leu	2910	Thr Tyr	Val Gly
2915	Leu Thr	Met Ala Ala Ser	2920	Thr Ser	Phe Pro Pro	2925	Arg Leu	Asp Ser
2930	Glu Gly	Leu Thr Ala Gln	2935	Val Ile	Ile Asp Ala	2940	Asn Asp	Gly Ala
2945	Arg Gly	Val Ile Glu Trp	2950	Gln Gln	Ser Arg Phe	2955	Glu Val	Asn Glu
2960	Thr His	Gly Ser Leu Thr	2965	Leu Val	Ala Gln Arg	2970	Ser Arg	Glu Pro
2975	Leu Gly	His Val Ser Leu	2980	Phe Val	Tyr Ala Gln	2985	Asn Leu	Glu Ala
2990	Gln Val	Gly Leu Asp Tyr	2995	Ile Phe	Thr Pro Met	3000	Ile Leu	His Phe
3005	Ala Asp	Gly Glu Arg Tyr	3010	Lys Asn	Val Asn Ile	3015	Met Ile	Leu Asp
3020	Asp Asp	Ile Pro Glu Gly	3025	Asp Glu	Lys Phe Gln	3030	Leu Ile	Leu Thr
3035	Asn Pro	Ser Pro Gly Leu	3040	Glu Leu	Gly Lys Asn	3045	Thr Ile	Ala Leu
3050	Ile Ile	Val Leu Ala Asn	3055	Asp Asp	Gly Pro Gly	3060	Val Leu	Ser Phe
3065	Asn Asn	Ser Glu His Phe	3070	Phe Leu	Arg Glu Pro	3075	Thr Ala	Leu Tyr
3080	Val Gln	Glu Ser Val Ala	3085	Val Leu	Tyr Ile Val	3090	Arg Glu	Pro Ala
3095	Gln Gly	Leu Phe Gly Thr	3100	Val Thr	Val Gln Phe	3105	Ile Val	Thr Glu
3110	Val Asn	Ser Ser Asn Glu	3115	Ser Lys	Asp Leu Thr	3120	Pro Ser	Lys Gly
3125	Tyr Ile	Val Leu Glu Glu	3130	Gly Val	Arg Phe Lys	3135	Ala Leu	Gln Ile

3140	Ser Ala	Ile Leu Asp Thr	3145	Glu Pro	Glu Met Asp	3150	Glu Tyr	Phe Val
3155	Cys Thr	Leu Phe Asn Pro	3160	Gly Gly	Ala Arg	3165	Leu Gly	Val His
3170	Val Gln	Thr Leu Ile Thr	3175	Val Leu	Gln Asn Gln	3180	Ala Pro	Leu Gly
3185	Leu Phe	Ser Ile Ser Ala	3190	Val Glu	Asn Arg Ala	3195	Thr Ser	Ile Asp
3200	Ile Glu	Glu Ala Asn Arg	3205	Val Val	Tyr Leu Asn	3210	Val Ser	Arg Thr
3215	Asn Asp	Ile Asp Leu Ala	3220	Val Ser	Val Gln Trp	3225	Glu Thr	Val Ser
3230	Glu Thr	Ala Phe Gly Met	3235	Arg Gly	Met Asp Val	3240	Val Phe	Ser Val
3245	Phe Gln	Ser Phe Leu Asp	3250	Glu Ser	Ala Ser Gly	3255	Trp Cys	Phe Phe
3260	Thr Leu	Glu Asn Leu Ile	3265	Tyr Gly	Ile Met Leu	3270	Arg Lys	Ser Ser
3275	Val Thr	Val Tyr Arg Trp	3280	Gln Gly	Ile Phe Ile	3285	Pro Val	Glu Asp
3290	Leu Asn	Ile Glu Asn Pro	3295	Lys Thr	Cys Glu Ala	3300	Phe Asn	Ile Gly
3305	Phe Ser	Pro Tyr Phe Val	3310	Ile Thr	His Glu Glu	3315	Arg Asn	Glu Glu
3320	Lys Pro	Ser Leu Asn Ser	3325	Val Phe	Thr Phe Thr	3330	Ser Gly	Phe Lys
3335	Leu Phe	Leu Val Gln Thr	3340	Ile Ile	Ile Leu Glu	3345	Ser Ser	Gln Val
3350	Arg Tyr	Phe Thr Ser Asp	3355	Ser Gln	Asp Tyr Leu	3360	Ile Ile	Ala Ser
3365	Gln Arg	Asp Asp Ser Glu	3370	Leu Thr	Gln Val Phe	3375	Arg Trp	Asn Gly
3380	Gly Ser	Phe Val Leu His	3385	Lys Lys	Leu Pro Val	3390	Arg Gly	Val Leu
3395	Thr Val	Ala Leu Phe Asn	3400	Lys Gly	Gly Ser Val	3405	Phe Leu	Ala Ile
3410	Ser Gln	Ala Asn Ala Arg	3415	Leu Asn	Ser Leu Leu	3420	Phe Arg	Trp Ser
3425	Gly Ser	Gly Phe Ile Asn	3430	Gln Gln	Val Pro Val	3435	Val Ser	Gly Thr
3440	Thr Glu	Val Glu Ala Leu	3445	Ser Ser	Ala Asn Asp	3450	Ile Tyr	Leu Ile
3455	Phe Ala	Glu Asn Val Phe	3460	Leu Gly	Asp Gln Asn	3465	Ser Ile	Asp Ile
3470	Phe Ile	Trp Glu Met Gly	3475	Gln Ser	Ser Phe Arg	3480	Tyr Phe	Gln Ser
3485	Val Asp	Phe Ala Ala Val	3490	Asn Arg	Ile His Ser	3495	Phe Thr	Pro Ala
3500	Ser Gly	Ile Ala His Ile	3505	Leu Leu	Ile Gly Pro	3510	Arg Tyr	Val Tyr
3515	Ser Phe	Thr Ala Gly Asn	3520	Ser Glu	Arg Asn Gln	3525	Phe Ser	Phe Val
3530	Leu Glu	Val Pro Ser Ala	3535	Tyr Asp	Val Val Ser	3540	Val Thr	Val Lys
3545	Ser Leu	Asn Ser Ser Lys	3550	Asn Leu	Ile Ala Leu	3555	Val Gly	Ala His
3560	Ser His	Ile Tyr Glu Leu	3565	Ala Tyr	Ile Ser Ser	3570	His Ser	Asp Phe
3575	Ile Pro	Ser Ser Gly Glu	3580	Leu Ile	Phe Glu Pro	3585	Gly Glu	Arg Glu
3590	Ala Thr	Ile Ala Val Asn	3595	Ile Leu	Asp Asp Thr	3600	Val Pro	Glu Lys
3605	Glu Glu	Ser Phe Lys Val	3610	Gln Leu	Lys Asn Pro	3615	Lys Gly	Gly Ala

3620	Glu Ile Gly Ile Asn Asp	3625	Ser Val Thr Ile Thr	3630	Ile Leu Ser Asn
3635	Asp Asp Ala Tyr Gly Ile	3640	Val Ala Phe Ala Gln	3645	Asn Ser Leu Tyr
3650	Lys Gln Val Glu Glu Met	3655	Glu Gln Asp Ser Leu	3660	Val Thr Leu Asn
3665	Val Glu Arg Leu Lys Gly	3670	Thr Tyr Gly Arg Ile	3675	Thr Ile Ala Trp
3680	Glu Ala Asp Gly Ser Ile	3685	Ser Asp Ile Phe Pro	3690	Thr Ser Gly Val
3695	Ile Leu Phe Thr Glu Gly	3700	Gln Val Leu Ser Thr	3705	Ile Thr Leu Thr
3710	Ile Leu Ala Asp Asn Ile	3715	Pro Glu Leu Ser Glu	3720	Val Val Ile Val
3725	Thr Leu Thr Arg Ile Thr	3730	Glu Gly Val Glu	3735	Asp Ser Tyr Lys
3740	Gly Ala Thr Ile Asp Gln	3745	Asp Arg Ser Lys Ser	3750	Val Ile Thr Thr
3755	Leu Pro Asn Asp Ser Pro	3760	Phe Gly Leu Val Gly	3765	Trp Arg Ala Ala
3770	Ser Val Phe Ile Arg Val	3775	Ala Glu Pro Lys Glu	3780	Asn Thr Thr Thr
3785	Leu Gln Leu Gln Ile Ala	3790	Arg Asp Lys Gly Leu	3795	Leu Gly Asp Ile
3800	Ala Ile His Leu Arg Ala	3805	Gln Pro Asn Phe Leu	3810	Leu His Val Asp
3815	Asn Gln Ala Thr Glu Asn	3820	Glu Asp Tyr Val Leu	3825	Gln Glu Thr Ile
3830	Ile Ile Met Lys Glu Asn	3835	Ile Lys Glu Ala His	3840	Ala Glu Val Ser
3845	Ile Leu Pro Asp Asp Leu	3850	Pro Glu Leu Glu Glu	3855	Gly Phe Ile Val
3860	Thr Ile Thr Glu Val Asn	3865	Leu Val Asn Ser Asp	3870	Phe Ser Thr Gly
3875	Gln Pro Ser Val Arg Arg	3880	Pro Gly Met Glu Ile	3885	Ala Glu Ile Met
3890	Ile Glu Glu Asn Asp Asp	3895	Pro Arg Gly Ile Phe	3900	Met Phe His Val
3905	Thr Arg Gly Ala Gly Glu	3910	Val Ile Thr Ala Tyr	3915	Glu Val Pro Pro
3920	Pro Leu Asn Val Leu Gln	3925	Val Pro Val Val Arg	3930	Leu Ala Gly Ser
3935	Phe Gly Ala Val Asn Val	3940	Tyr Trp Lys Ala Ser	3945	Pro Asp Ser Ala
3950	Gly Leu Glu Asp Phe Lys	3955	Pro Ser His Gly Ile	3960	Leu Glu Phe Ala
3965	Asp Lys Gln Val Thr Ala	3970	Met Ile Glu Ile Thr	3975	Ile Ile Asp Asp
3980	Ala Glu Phe Glu Leu Thr	3985	Glu Thr Phe Asn Ile	3990	Ser Leu Ile Ser
3995	Val Ala Gly Gly Gly Arg	4000	Leu Gly Asp Asp Val	4005	Val Val Thr Val
4010	Val Ile Pro Gln Asn Asp	4015	Ser Pro Phe Gly Val	4020	Phe Gly Phe Glu
4025	Glu Lys Thr Val Met Ile	4030	Asp Glu Ser Leu Ser	4035	Ser Asp Asp Pro
4040	Asp Ser Tyr Val Thr Leu	4045	Thr Val Val Arg Ser	4050	Pro Gly Gly Lys
4055	Gly Thr Val Arg Leu Glu	4060	Trp Thr Ile Asp Glu	4065	Lys Ala Lys His
4070	Asn Leu Ser Pro Leu Asn	4075	Gly Thr Leu His Phe	4080	Asp Glu Thr Glu
4085	Ser Gln Lys Thr Ile Val	4090	Leu His Thr Leu Gln	4095	Asp Thr Val Leu

4100	Glu Glu Asp Arg Arg Phe	4105	Thr Ile Gln Leu Ile	4110	Ser Ile Asp Glu
4115	Val Glu Ile Ser Pro Val	4120	Lys Gly Ser Ala Ser	4125	Ile Ile Ile Arg
4130	Gly Asp Lys Arg Ala Ser	4135	Gly Glu Val Gly Ile	4140	Ala Pro Ser Ser
4145	Arg His Ile Leu Ile Gly	4150	Glu Pro Ser Ala Lys	4155	Tyr Asn Gly Thr
4160	Ala Ile Ile Ser Leu Val	4165	Arg Gly Pro Gly Ile	4170	Leu Gly Glu Val
4175	Thr Val Phe Trp Arg Ile	4180	Phe Pro Pro Ser Val	4185	Gly Glu Phe Ala
4190	Glu Thr Ser Gly Lys Leu	4195	Thr Met Arg Asp Glu	4200	Gln Ser Ala Val
4205	Ile Val Val Ile Gln Ala	4210	Leu Asn Asp Asp Ile	4215	Pro Glu Glu Lys
4220	Ser Phe Tyr Glu Phe Gln	4225	Leu Thr Ala Val Ser	4230	Gly Gly Gly Val
4235	Leu Ser Glu Ser Ser Ser	4240	Thr Ala Asn Ile Thr	4245	Val Val Ala Ser
4250	Asp Ser Pro Tyr Gly Arg	4255	Phe Ala Phe Ser His	4260	Glu Gln Leu Arg
4265	Val Ser Glu Ala Gln Arg	4270	Val Asn Ile Thr Ile	4275	Ile Arg Ser Ser
4280	Gly Asp Phe Gly His Val	4285	Arg Leu Trp Tyr Lys	4290	Thr Met Ser Gly
4295	Thr Ala Glu Ala Gly Leu	4300	Asp Phe Val Pro Ala	4305	Ala Gly Glu Leu
4310	Leu Phe Glu Ala Gly Glu	4315	Met Arg Lys Ser Leu	4320	His Val Glu Ile
4325	Leu Asp Asp Asp Tyr Pro	4330	Glu Gly Pro Glu Glu	4335	Phe Ser Leu Thr
4340	Ile Thr Lys Val Glu Leu	4345	Gln Gly Arg Gly Tyr	4350	Asp Phe Thr Ile
4355	Gln Glu Asn Gly Leu Gln	4360	Ile Asp Gln Pro Pro	4365	Glu Ile Gly Asn
4370	Ile Ser Ile Val Arg Ile	4375	Ile Ile Met Lys Asn	4380	Asp Asn Ala Glu
4385	Gly Ile Ile Glu Phe Asp	4390	Pro Lys Tyr Thr Ala	4395	Phe Glu Val Glu
4400	Glu Asp Val Gly Leu Ile	4405	Met Ile Pro Val Val	4410	Arg Leu His Gly
4415	Thr Tyr Gly Tyr Val Thr	4420	Ala Asp Phe Ile Ser	4425	Gln Ser Ser Ser
4430	Ala Ser Pro Gly Gly Val	4435	Asp Tyr Ile Leu His	4440	Gly Ser Thr Val
4445	Thr Phe Gln His Gly Gln	4450	Asn Leu Ser Phe Ile	4455	Asn Ile Ser Ile
4460	Ile Asp Asp Asn Glu Ser	4465	Glu Phe Glu Glu Pro	4470	Ile Glu Ile Leu
4475	Leu Thr Gly Ala Thr Gly	4480	Gly Ala Val Leu Gly	4485	Arg His Leu Val
4490	Ser Arg Ile Ile Ile Ala	4495	Lys Ser Asp Ser Pro	4500	Phe Gly Val Ile
4505	Arg Phe Leu Asn Gln Ser	4510	Lys Ile Ser Ile Ala	4515	Asn Pro Asn Ser
4520	Thr Met Ile Leu Ser Leu	4525	Val Leu Glu Arg Thr	4530	Gly Gly Leu Leu
4535	Gly Glu Ile Gln Val Asn	4540	Trp Glu Thr Val Gly	4545	Pro Asn Ser Gln
4550	Glu Ala Leu Leu Pro Gln	4555	Asn Arg Asp Ile Ala	4560	Asp Pro Val Ser
4565	Gly Leu Phe Tyr Phe Gly	4570	Glu Gly Glu Gly Gly	4575	Val Arg Thr Ile

4580	Ile	Leu	Thr	Ile	Tyr	Pro	His	Glu	Glu	Ile	Glu	Val	Glu	Glu	Thr
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4610	Ser	Arg	Ala	Lys	Asp	Val	Thr	Leu	Thr	Ile	Gln	Glu	Phe	Gly	Asp
4625	Pro	Asn	Gly	Val	Val	Gln	Phe	Ala	Pro	Glu	Thr	Leu	Ser	Lys	Lys
4640	Thr	Tyr	Ser	Glu	Pro	Leu	Ala	Leu	Glu	Gly	Pro	Leu	Leu	Ile	Thr
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4670	Tyr	Trp	Glu	Leu	Ser	Ser	Glu	Phe	Asp	Ile	Thr	Glu	Asp	Phe	Leu
4685	Ser	Thr	Ser	Gly	Phe	Phe	Thr	Ile	Ala	Asp	Gly	Glu	Ser	Glu	Ala
4700	Ser	Phe	Asp	Val	His	Leu	Leu	Pro	Asp	Glu	Val	Pro	Glu	Ile	Glu
4715	Glu	Asp	Tyr	Val	Ile	Gln	Leu	Val	Ser	Val	Glu	Gly	Gly	Ala	Glu
4730	Leu	Asp	Leu	Glu	Lys	Ser	Ile	Thr	Trp	Phe	Ser	Val	Tyr	Ala	Asn
4745	Asp	Asp	Pro	His	Gly	Val	Phe	Ala	Leu	Tyr	Ser	Asp	Arg	Gln	Ser
4760	Ile	Leu	Ile	Gly	Gln	Asn	Leu	Ile	Arg	Ser	Ile	Gln	Ile	Asn	Ile
4775	Thr	Arg	Leu	Ala	Gly	Thr	Phe	Gly	Asp	Val	Ala	Val	Gly	Leu	Arg
4790	Ile	Ser	Ser	Asp	His	Lys	Glu	Gln	Pro	Ile	Val	Thr	Glu	Asn	Ala
4805	Glu	Arg	Gln	Leu	Val	Val	Lys	Asp	Gly	Ala	Thr	Tyr	Lys	Val	Asp
4820	Val	Val	Pro	Ile	Lys	Asn	Gln	Val	Phe	Leu	Ser	Leu	Gly	Ser	Asn
4835	Phe	Thr	Leu	Gln	Leu	Val	Thr	Val	Met	Leu	Val	Gly	Gly	Arg	Phe
4850	Tyr	Gly	Met	Pro	Thr	Ile	Leu	Gln	Glu	Ala	Lys	Ser	Ala	Val	Leu
4865	Pro	Val	Ser	Glu	Lys	Ala	Ala	Asn	Ser	Gln	Val	Gly	Phe	Glu	Ser
4880	Thr	Ala	Phe	Gln	Leu	Met	Asn	Ile	Thr	Ala	Gly	Thr	Ser	His	Val
4895	Met	Ile	Ser	Arg	Arg	Gly	Thr	Tyr	Gly	Ala	Leu	Ser	Val	Ala	Trp
4910	Thr	Thr	Gly	Tyr	Ala	Pro	Gly	Leu	Glu	Ile	Pro	Glu	Phe	Ile	Val
4925	Val	Gly	Asn	Met	Thr	Pro	Thr	Leu	Gly	Ser	Leu	Ser	Phe	Ser	His
4940	Gly	Glu	Gln	Arg	Lys	Gly	Val	Phe	Leu	Trp	Thr	Phe	Pro	Ser	Pro
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4970	Ser	Ala	Pro	Gly	Gly	Ala	Gln	Leu	Arg	Ser	Gly	Phe	Ile	Val	Ala
4985	Glu	Ile	Glu	Pro	Met	Gly	Val	Phe	Gln	Phe	Ser	Thr	Ser	Ser	Arg
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5015	Gln	Arg	Leu	Phe	Gly	Phe	His	Ser	Asp	Leu	Ile	Lys	Val	Ser	Tyr
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5045	Val	Gln	Asn	Gly	Glu	Leu	Phe	Phe	Gln	Lys	Phe	Gln	Thr	Glu	Val

5060	Asp Phe	Glu Ile Thr Ile	5065	Ile Asn	Asp Gln Leu	5070	Ser Glu	Ile Glu
5075	Glu Phe	Phe Tyr Ile Asn	5080	Leu Thr	Ser Val Glu	5085	Ile Arg	Gly Leu
5090	Gln Lys	Phe Asp Val Asn	5095	Trp Ser	Pro Arg Leu	5100	Asn Leu	Asp Phe
5105	Ser Val	Ala Val Ile Thr	5110	Ile Leu	Asp Asn Asp	5115	Asp Leu	Ala Gly
5120	Met Asp	Ile Ser Phe Pro	5125	Glu Thr	Thr Val Ala	5130	Val Ala	Val Asp
5135	Thr Thr	Leu Ile Pro Val	5140	Glu Thr	Glu Ser Thr	5145	Thr Tyr	Leu Ser
5150	Thr Ser	Lys Thr Thr Thr	5155	Ile Leu	Gln Pro Thr	5160	Asn Val	Val Ala
5165	Ile Val	Thr Glu Ala Thr	5170	Gly Val	Ser Ala Ile	5175	Pro Glu	Lys Leu
5180	Val Thr	Leu His Gly Thr	5185	Pro Ala	Val Ser Glu	5190	Lys Pro	Asp Val
5195	Ala Thr	Val Thr Ala Asn	5200	Val Ser	Ile His Gly	5205	Thr Phe	Ser Leu
5210	Gly Pro	Ser Ile Val Tyr	5215	Ile Glu	Glu Glu Met	5220	Lys Asn	Gly Thr
5225	Phe Asn	Thr Ala Glu Val	5230	Leu Ile	Arg Arg Thr	5235	Gly Gly	Phe Thr
5240	Gly Asn	Val Ser Ile Thr	5245	Val Lys	Thr Phe Gly	5250	Glu Arg	Cys Ala
5255	Gln Met	Glu Pro Asn Ala	5260	Leu Pro	Phe Arg Gly	5265	Ile Tyr	Gly Ile
5270	Ser Asn	Leu Thr Trp Ala	5275	Val Glu	Glu Glu Asp	5280	Phe Glu	Glu Gln
5285	Thr Leu	Thr Leu Ile Phe	5290	Leu Asp	Gly Glu Arg	5295	Glu Arg	Lys Val
5300	Ser Val	Gln Ile Leu Asp	5305	Asp Asp	Glu Pro Glu	5310	Gly Gln	Glu Phe
5315	Phe Tyr	Val Phe Leu Thr	5320	Asn Pro	Gln Gly Gly	5325	Ala Gln	Ile Val
5330	Glu Gly	Lys Asp Asp Thr	5335	Gly Phe	Ala Ala Phe	5340	Ala Met	Val Ile
5345	Ile Thr	Gly Ser Asp Leu	5350	His Asn	Gly Ile Ile	5355	Gly Phe	Ser Glu
5360	Glu Ser	Gln Ser Gly Leu	5365	Glu Leu	Arg Glu Gly	5370	Ala Val	Met Arg
5375	Arg Leu	His Leu Ile Val	5380	Thr Arg	Gln Pro Asn	5385	Arg Ala	Phe Glu
5390	Asp Val	Lys Val Phe Trp	5395	Arg Val	Thr Leu Asn	5400	Lys Thr	Val Val
5405	Val Leu	Gln Lys Asp Gly	5410	Val Asn	Leu Met Glu	5415	Glu Leu	Gln Ser
5420	Val Ser	Gly Thr Thr Thr	5425	Cys Thr	Met Gly Gln	5430	Thr Lys	Cys Phe
5435	Ile Ser	Ile Glu Leu Lys	5440	Pro Glu	Lys Val Pro	5445	Gln Val	Glu Val
5450	Tyr Phe	Phe Val Glu Leu	5455	Tyr Glu	Ala Thr Ala	5460	Gly Ala	Ala Ile
5465	Asn Asn	Ser Ala Arg Phe	5470	Ala Gln	Ile Lys Ile	5475	Leu Glu	Ser Asp
5480	Glu Ser	Gln Ser Leu Val	5485	Tyr Phe	Ser Val Gly	5490	Ser Arg	Leu Ala
5495	Val Ala	His Lys Lys Ala	5500	Thr Leu	Ile Ser Leu	5505	Gln Val	Ala Arg
5510	Asp Ser	Gly Thr Gly Leu	5515	Met Met	Ser Val Asn	5520	Phe Ser	Thr Gln
5525	Glu Leu	Arg Ser Ala Glu	5530	Thr Ile	Gly Arg Thr	5535	Ile Ile	Ser Pro

Ala	5540	Ile	Ser	Gly	Lys	Asp	Phe	5545	Val	Ile	Thr	Glu	Gly	5550	Thr	Leu	Val
Phe	5555	Glu	Pro	Gly	Gln	Arg	Ser	5560	Thr	Val	Leu	Asp	Val	5565	Ile	Leu	Thr
Pro	5570	Glu	Thr	Gly	Ser	Leu	Asn	5575	Ser	Phe	Pro	Lys	Arg	5580	Phe	Gln	Ile
Val	5585	Leu	Phe	Asp	Pro	Lys	Gly	5590	Gly	Ala	Arg	Ile	Asp	5595	Lys	Val	Tyr
Gly	5600	Thr	Ala	Asn	Ile	Thr	Leu	5605	Val	Ser	Asp	Ala	Asp	5610	Ser	Gln	Ala
Ile	5615	Trp	Gly	Leu	Ala	Asp	Gln	5620	Leu	His	Gln	Pro	Val	5625	Asn	Asp	Asp
Ile	5630	Leu	Asn	Arg	Val	Leu	His	5635	Thr	Ile	Ser	Met	Lys	5640	Val	Ala	Thr
Glu	5645	Asn	Thr	Asp	Glu	Gln	Leu	5650	Ser	Ala	Met	Met	His	5655	Leu	Ile	Glu
Lys	5660	Ile	Thr	Thr	Glu	Gly	Lys	5665	Ile	Gln	Ala	Phe	Ser	5670	Val	Ala	Ser
Arg	5675	Thr	Leu	Phe	Tyr	Glu	Ile	5680	Leu	Cys	Ser	Leu	Ile	5685	Asn	Pro	Lys
Arg	5690	Lys	Asp	Thr	Arg	Gly	Phe	5695	Ser	His	Phe	Ala	Glu	5700	Val	Thr	Glu
Asn	5705	Phe	Ala	Phe	Ser	Leu	Leu	5710	Thr	Asn	Val	Thr	Cys	5715	Gly	Ser	Pro
Gly	5720	Glu	Lys	Ser	Lys	Thr	Ile	5725	Leu	Asp	Ser	Cys	Pro	5730	Tyr	Leu	Ser
Ile	5735	Leu	Ala	Leu	His	Trp	Tyr	5740	Pro	Gln	Gln	Ile	Asn	5745	Gly	His	Lys
Phe	5750	Glu	Gly	Lys	Glu	Gly	Asp	5755	Tyr	Ile	Arg	Ile	Pro	5760	Glu	Arg	Leu
Leu	5765	Asp	Val	Gln	Asp	Ala	Glu	5770	Ile	Met	Ala	Gly	Lys	5775	Ser	Thr	Cys
Lys	5780	Leu	Val	Gln	Phe	Thr	Glu	5785	Tyr	Ser	Ser	Gln	Gln	5790	Trp	Phe	Ile
Ser	5795	Gly	Asn	Asn	Leu	Pro	Thr	5800	Leu	Lys	Asn	Lys	Val	5805	Leu	Ser	Leu
Ser	5810	Val	Lys	Gly	Gln	Ser	Ser	5815	Gln	Leu	Leu	Thr	Asn	5820	Asp	Asn	Glu
Val	5825	Leu	Tyr	Arg	Ile	Tyr	Ala	5830	Ala	Glu	Pro	Arg	Ile	5835	Ile	Pro	Gln
Thr	5840	Ser	Leu	Cys	Leu	Leu	Trp	5845	Asn	Gln	Ala	Ala	Ala	5850	Ser	Trp	Leu
Ser	5855	Asp	Ser	Gln	Phe	Cys	Lys	5860	Val	Ile	Glu	Glu	Thr	5865	Ala	Asp	Tyr
Val	5870	Glu	Cys	Ala	Cys	Ser	His	5875	Met	Ser	Val	Tyr	Ala	5880	Val	Tyr	Ala
Arg	5885	Thr	Asp	Asn	Leu	Ser	Ser	5890	Tyr	Asn	Glu	Ala	Phe	5895	Phe	Thr	Ser
Gly	5900	Phe	Ile	Cys	Ile	Ser	Gly	5905	Leu	Cys	Leu	Ala	Val	5910	Leu	Ser	His
Ile	5915	Phe	Cys	Ala	Arg	Tyr	Ser	5920	Met	Phe	Ala	Ala	Lys	5925	Leu	Leu	Thr
His	5930	Met	Met	Ala	Ala	Ser	Leu	5935	Gly	Thr	Gln	Ile	Leu	5940	Phe	Leu	Ala
Ser	5945	Ala	Tyr	Ala	Ser	Pro	Gln	5950	Leu	Ala	Glu	Glu	Ser	5955	Cys	Ser	Ala
Met	5960	Ala	Ala	Val	Thr	His	Tyr	5965	Leu	Tyr	Leu	Cys	Gln	5970	Phe	Ser	Trp
Met	5975	Leu	Ile	Gln	Ser	Val	Asn	5980	Phe	Trp	Tyr	Val	Leu	5985	Val	Met	Asn
Asp	5990	Glu	His	Thr	Glu	Arg	Arg	5995	Tyr	Leu	Leu	Phe	Phe	6000	Leu	Leu	Ser
Trp	6005	Gly	Leu	Pro	Ala	Phe	Val	6010	Val	Ile	Leu	Leu	Ile	6015	Val	Ile	Leu

6020	Lys Gly Ile Tyr His Gln	6025	Ser Met Ser Gln Ile	6030	Tyr Gly Leu Ile
6035	His Gly Asp Leu Cys Phe	6040	Ile Pro Asn Val Tyr	6045	Ala Ala Leu Phe
6050	Thr Ala Ala Leu Val Pro	6055	Leu Thr Cys Leu Val	6060	Val Val Phe Val
6065	Val Phe Ile His Ala Tyr	6070	Gln Val Lys Pro Gln	6075	Trp Lys Ala Tyr
6080	Asp Asp Val Phe Arg Gly	6085	Thr Asn Ala Ala	6090	Glu Ile Pro Leu
6095	Ile Leu Tyr Leu Phe Ala	6100	Leu Ile Ser Val Thr	6105	Trp Leu Trp Gly
6110	Gly Leu His Met Ala Tyr	6115	Arg His Phe Trp Met	6120	Leu Val Leu Phe
6125	Val Ile Phe Asn Ser Leu	6130	Gln Gly Leu Tyr Val	6135	Phe Met Val Tyr
6140	Phe Ile Leu His Asn Gln	6145	Met Cys Cys Pro Met	6150	Lys Ala Ser Tyr
6155	Thr Val Glu Met Asn Gly	6160	His Pro Gly Pro Ser	6165	Thr Ala Phe Phe
6170	Thr Pro Gly Ser Gly Met	6175	Pro Pro Ala Gly Gly	6180	Glu Ile Ser Lys
6185	Ser Thr Gln Asn Leu Ile	6190	Gly Ala Met Glu Glu	6195	Val Pro Pro Asp
6200	Trp Glu Arg Ala Ser Phe	6205	Gln Gln Gly Ser Gln	6210	Ala Ser Pro Asp
6215	Leu Lys Pro Ser Pro Gln	6220	Asn Gly Ala Thr Phe	6225	Pro Ser Ser Gly
6230	Gly Tyr Gly Gln Gly Ser	6235	Leu Ile Ala Asp Glu	6240	Glu Ser Gln Glu
6245	Phe Asp Asp Leu Ile Phe	6250	Ala Leu Lys Thr Gly	6255	Ala Gly Leu Ser
6260	Val Ser Asp Asn Glu Ser	6265	Gly Gln Gly Ser Gln	6270	Glu Gly Gly Thr
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6305
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 <213> homo sapiens
 <400> 78

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Gly Trp Tyr Leu Pro Ser Tyr Leu Thr Val Val Ile Gln Leu Ala Asn	
	35 40 45
Ile Gly Pro Leu Leu Val Thr Leu Leu His His Phe Arg Pro Ser Cys	
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Leu Ser Glu Val Pro Ile Ile Phe Thr Leu Leu Gly Val Gly Thr Val	
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Thr Cys Ile Ile Phe Ala Phe Leu Trp Asn Met Thr Ser Trp Val Leu	
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Asp Gly His His Ser Ile Ala Phe Leu Val Leu Thr Phe Phe Leu Ala	
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Leu Val Asp Cys Thr Ser Ser Val Thr Phe Leu Pro Phe Met Ser Arg	
	115 120 125
Leu Pro Thr Tyr Tyr Leu Thr Thr Phe Phe Val Gly Glu Gly Leu Ser	
	130 135 140
Gly Leu Leu Pro Ala Leu Val Ala Leu Ala Gln Gly Ser Gly Leu Thr	
145	150 155 160

Thr	Cys	Val	Asn	Val	Thr	Glu	Ile	Ser	Asp	Ser	Val	Pro	Ser	Pro	Val
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Pro	Thr	Arg	Glu	Thr	Asp	Ile	Ala	Gln	Gly	Val	Pro	Arg	Ala	Leu	Val
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Ser	Ala	Leu	Pro	Gly	Met	Glu	Ala	Pro	Leu	Ser	His	Leu	Glu	Ser	Arg
		195					200					205			
Tyr	Leu	Pro	Ala	His	Phe	Ser	Pro	Leu	Val	Phe	Phe	Leu	Leu	Leu	Ser
	210					215					220				
Ile	Met	Met	Ala	Cys	Cys	Leu	Val	Ala	Phe	Phe	Val	Leu	Gln	Arg	Gln
	225				230					235					240
Pro	Arg	Cys	Trp	Glu	Ala	Ser	Val	Glu	Asp	Leu	Leu	Asn	Asp	Gln	Val
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Thr	Leu	His	Ser	Ile	Arg	Leu	Arg	Glu	Glu	Asn	Asp	Leu	Gly	Pro	Ala
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Gly	Met	Val	Asp	Ser	Ser	Gln	Gly	Gln	Gly	Tyr	Leu	Glu	Gly	Lys	Ala
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Ala	Pro	Cys	Cys	Pro	Ala	His	Leu	Ala	Phe	Val	Tyr	Thr	Leu	Val	Ala
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Phe	Val	Asn	Ala	Leu	Thr	Asn	Gly	Met	Leu	Pro	Ser	Val	Gln	Thr	Tyr
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Ser	Cys	Leu	Ser	Tyr	Gly	Pro	Val	Ala	Tyr	His	Leu	Ala	Ala	Thr	Leu
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Ser	Ile	Val	Ala	Asn	Pro	Leu	Ala	Ser	Leu	Val	Ser	Met	Phe	Leu	Pro
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Asn	Arg	Ser	Leu	Leu	Phe	Leu	Gly	Val	Leu	Ser	Val	Leu	Gly	Thr	Cys
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Phe	Gly	Gly	Tyr	Asn	Met	Ala	Met	Ala	Val	Met	Ser	Pro	Cys	Pro	Leu
	370					375					380				
Leu	Gln	Gly	His	Trp	Gly	Gly	Glu	Val	Leu	Ile	Val	Ala	Ser	Trp	Val
	385				390					395					400
Leu	Phe	Ser	Gly	Cys	Leu	Ser	Tyr	Val	Lys	Val	Met	Leu	Gly	Val	Val
				405					410					415	
Leu	Arg	Asp	Leu	Ser	Arg	Ser	Ala	Leu	Leu	Trp	Cys	Gly	Ala	Ala	Val
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Gln	Leu	Gly	Ser	Leu	Leu	Gly	Ala	Leu	Leu	Met	Phe	Pro	Leu	Val	Asn
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Val	Leu	Arg	Leu	Phe	Ser	Ser	Ala	Asp	Phe	Cys	Asn	Leu	His	Cys	Pro
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Ala
465

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<211> 458

<212> PRT

<213> homo sapiens

<400> 79

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			20					25					30		
Phe	Val	Arg	Tyr	Asn	His	Lys	Thr	Asp	Ala	Ala	Leu	Trp	His	Arg	Ser
		35					40					45			
Asn	His	Ser	Asn	Ala	Asp	Asn	Glu	Phe	Tyr	Phe	Arg	Tyr	Pro	Ser	Phe
	50					55					60				
Gln	Asp	Val	His	Ala	Met	Val	Phe	Val	Gly	Phe	Gly	Phe	Leu	Met	Val
	65				70					75					80
Phe	Leu	Gln	Arg	Tyr	Gly	Phe	Ser	Ser	Val	Gly	Phe	Thr	Phe	Leu	Leu
				85					90					95	
Ala	Ala	Phe	Ala	Leu	Gln	Trp	Ser	Thr	Leu	Val	Gln	Gly	Phe	Leu	His
			100					105					110		
Ser	Phe	His	Gly	Gly	His	Ile	His	Val	Gly	Val	Glu	Ser	Met	Ile	Asn
		115					120					125			
Ala	Asp	Phe	Cys	Ala	Gly	Ala	Val	Leu	Ile	Ser	Phe	Gly	Ala	Val	Leu
	130					135					140				
Gly	Lys	Thr	Gly	Pro	Thr	Gln	Leu	Leu	Leu	Met	Ala	Leu	Leu	Glu	Val

145	Val	Leu	Phe	Gly	Ile	150	Asn	Glu	Phe	Val	Leu	155	Leu	His	Leu	Leu	Gly	160	Val
				165							170						175		
Arg	Asp	Ala	Gly	Gly	Ser	Met	Thr	Ile	185	His	Thr	Phe	Gly	Ala	Tyr	Phe			
			180																
Gly	Leu	Val	Leu	Ser	Arg	Val	Leu	Tyr	Arg	Pro	Gln	Leu	Glu	Lys	Ser				
		195					200					205							
Lys	His	Arg	Gln	Gly	Ser	Val	Tyr	His	Ser	Asp	Leu	Phe	Ala	Met	Ile				
	210					215					220								
Gly	Thr	Ile	Phe	Leu	Trp	Ile	Phe	Trp	Pro	Ser	Phe	Asn	Ala	Ala	Leu				
225					230					235									
Thr	Ala	Leu	Gly	Ala	Gly	Gln	His	Arg	Thr	Ala	Leu	Asn	Thr	Tyr	Tyr				
			245						250										
Ser	Leu	Ala	Ala	Ser	Thr	Leu	Gly	Thr	Phe	Ala	Leu	Ser	Ala	Leu	Val				
			260						265										
Gly	Glu	Asp	Gly	Arg	Leu	Asp	Met	Val	His	Ile	Gln	Asn	Ala	Ala	Leu				
		275					280					285							
Ala	Gly	Gly	Val	Val	Val	Gly	Thr	Ser	Ser	Glu	Met	Met	Leu	Thr	Pro				
	290					295					300								
Phe	Gly	Ala	Leu	Ala	Ala	Gly	Phe	Leu	Ala	Gly	Thr	Val	Ser	Thr	Leu				
305					310					315									
Gly	Tyr	Lys	Phe	Phe	Thr	Pro	Ile	Leu	Glu	Ser	Lys	Phe	Lys	Val	Gln				
			325						330										
Asp	Thr	Cys	Gly	Val	His	Asn	Leu	His	Gly	Met	Pro	Gly	Val	Leu	Gly				
			340					345											
Ala	Leu	Leu	Gly	Val	Leu	Val	Ala	Gly	Leu	Ala	Thr	His	Glu	Ala	Tyr				
		355					360												
Gly	Asp	Gly	Leu	Glu	Ser	Val	Phe	Pro	Leu	Ile	Ala	Glu	Gly	Gln	Arg				
	370					375					380								
Ser	Ala	Thr	Ser	Gln	Ala	Met	His	Gln	Leu	Phe	Gly	Leu	Phe	Val	Thr				
385					390					395									
Leu	Met	Phe	Ala	Ser	Val	Gly	Gly	Gly	Leu	Gly	Gly	Leu	Leu	Leu	Lys				
			405						410										
Leu	Pro	Phe	Leu	Asp	Ser	Pro	Pro	Asp	Ser	Gln	His	Tyr	Glu	Asp	Gln				
			420					425											
Val	His	Trp	Gln	Val	Pro	Gly	Glu	His	Glu	Asp	Lys	Ala	Gln	Arg	Pro				
		435					440					445							
Leu	Arg	Val	Glu	Glu	Ala	Asp	Thr	Gln	Ala										
	450					455													

<210> 80

<211> 871

<212> PRT

<213> homo sapiens

<400> 80

Met	Ile	Lys	Lys	Phe	Asp	Lys	Lys	Asp	Glu	Glu	Ser	Gly	Ser	Gly	Ser				
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Asn	Pro	Phe	Gln	His	Leu	Glu	Lys	Ser	Ala	Val	Leu	Gln	Glu	Ala	Arg				
			20					25				30							
Ile	Phe	Asn	Glu	Thr	Pro	Ile	Asn	Pro	Arg	Arg	Cys	Leu	His	Ile	Leu				
		35				40						45							
Thr	Lys	Ile	Leu	Tyr	Leu	Leu	Asn	Gln	Gly	Glu	His	Phe	Gly	Thr	Thr				
	50					55					60								
Glu	Ala	Thr	Glu	Ala	Phe	Phe	Ala	Met	Thr	Arg	Leu	Phe	Gln	Ser	Asn				
65					70				75						80				
Asp	Gln	Thr	Leu	Arg	Arg	Met	Cys	Tyr	Leu	Thr	Ile	Lys	Glu	Met	Ala				
			85					90						95					
Thr	Ile	Ser	Glu	Asp	Val	Ile	Ile	Val	Thr	Ser	Ser	Leu	Thr	Lys	Asp				
			100					105						110					
Met	Thr	Gly	Lys	Glu	Asp	Val	Tyr	Arg	Gly	Pro	Ala	Ile	Arg	Ala	Leu				
		115				120						125							
Cys	Arg	Ile	Thr	Asp	Gly	Thr	Met	Leu	Gln	Ala	Ile	Glu	Arg	Tyr	Met				
	130					135					140								
Lys	Gln	Ala	Ile	Val	Asp	Lys	Val	Ser	Ser	Val	Ser	Ser	Ser	Ala	Leu				
145					150					155					160				

Val	Ser	Ser	Leu	His	Met	Met	Lys	Ile	Ser	Tyr	Asp	Val	Val	Lys	Arg
Trp	Ile	Asn	Glu	Ala	Gln	Glu	Ala	Ala	Ser	Ser	Asp	Asn	Ile	Met	Val
Gln	Tyr	His	Ala	Leu	Gly	Val	Leu	Tyr	His	Leu	Arg	Lys	Asn	Asp	Arg
Leu	Ala	Val	Ser	Lys	Met	Leu	Asn	Lys	Phe	Thr	Lys	Ser	Gly	Leu	Lys
Ser	Gln	Phe	Ala	Tyr	Cys	Met	Leu	Ile	Arg	Ile	Ala	Ser	Arg	Leu	Leu
Lys	Glu	Thr	Glu	Asp	Gly	His	Glu	Ser	Pro	Leu	Phe	Asp	Phe	Ile	Glu
Ser	Cys	Leu	Arg	Asn	Lys	His	Glu	Met	Val	Ile	Tyr	Glu	Ala	Ala	Ser
Ala	Ile	Ile	His	Leu	Pro	Asn	Cys	Thr	Ala	Arg	Glu	Leu	Ala	Pro	Ala
Val	Ser	Val	Leu	Gln	Leu	Phe	Cys	Ser	Ser	Pro	Lys	Pro	Ala	Leu	Arg
Tyr	Ala	Ala	Val	Arg	Thr	Leu	Asn	Lys	Val	Ala	Met	Lys	His	Pro	Ser
Ala	Val	Thr	Ala	Cys	Asn	Leu	Asp	Leu	Glu	Asn	Leu	Ile	Thr	Asp	Ser
Asn	Arg	Ser	Ile	Ala	Thr	Leu	Ala	Ile	Thr	Thr	Leu	Leu	Lys	Thr	Gly
Ser	Glu	Ser	Ser	Val	Asp	Arg	Leu	Met	Lys	Gln	Ile	Ser	Ser	Phe	Val
Ser	Glu	Ile	Ser	Asp	Glu	Phe	Lys	Val	Val	Val	Val	Gln	Ala	Ile	Ser
Ala	Leu	Cys	Gln	Lys	Tyr	Pro	Arg	Lys	His	Ser	Val	Met	Met	Thr	Phe
Leu	Ser	Asn	Met	Leu	Arg	Asp	Asp	Gly	Gly	Phe	Glu	Tyr	Lys	Arg	Ala
Ile	Val	Asp	Cys	Ile	Ile	Ser	Ile	Val	Glu	Glu	Asn	Pro	Glu	Ser	Lys
Glu	Ala	Gly	Leu	Ala	His	Leu	Cys	Glu	Phe	Ile	Glu	Asp	Cys	Glu	His
Thr	Val	Leu	Ala	Thr	Lys	Ile	Leu	His	Leu	Leu	Gly	Lys	Glu	Gly	Pro
Arg	Thr	Pro	Val	Pro	Ser	Lys	Tyr	Ile	Arg	Phe	Ile	Phe	Asn	Arg	Val
Val	Leu	Glu	Asn	Glu	Ala	Val	Arg	Ala	Ala	Ala	Val	Ser	Ala	Leu	Ala
Lys	Phe	Gly	Ala	Gln	Asn	Glu	Ser	Leu	Leu	Pro	Ser	Ile	Leu	Val	Leu
Leu	Gln	Arg	Cys	Met	Met	Asp	Thr	Asp	Asp	Glu	Val	Arg	Asp	Arg	Ala
Thr	Phe	Tyr	Leu	Asn	Val	Leu	Gln	Gln	Arg	Gln	Met	Ala	Leu	Asn	Ala
Thr	Tyr	Ile	Phe	Asn	Gly	Leu	Thr	Val	Ser	Val	Pro	Gly	Met	Glu	Lys
Ala	Leu	His	Gln	Tyr	Thr	Leu	Glu	Pro	Ser	Glu	Lys	Pro	Phe	Asp	Met
Lys	Ser	Ile	Pro	Leu	Ala	Met	Ala	Pro	Val	Phe	Glu	Gln	Lys	Ala	Glu
Ile	Thr	Leu	Val	Ala	Thr	Lys	Pro	Glu	Lys	Leu	Ala	Pro	Ser	Arg	Gln
Asp	Ile	Phe	Gln	Glu	Gln	Leu	Ala	Ala	Ile	Pro	Glu	Phe	Leu	Asn	Ile
Gly	Pro	Leu	Phe	Lys	Ser	Ser	Glu	Pro	Val	Gln	Leu	Thr	Glu	Ala	Glu
Thr	Glu	Tyr	Phe	Val	Arg	Cys	Ile	Lys	His	Met	Phe	Thr	Asn	His	Ile
Val	Phe	Gln	Phe	Asp	Cys	Thr	Asn	Thr	Leu	Asn	Asp	Gln	Leu	Leu	Glu

Lys Val Thr Val Gln Met Glu Pro Ser Asp Ser Tyr Glu Val Leu Ser
 Cys Ile 675 Pro Ala Pro Ser Leu 680 Pro Tyr Asn Gln Pro 685 Gly Ile Cys Tyr
 Thr 690 Leu Val Arg Leu Pro 695 Asp Asp Pro Thr Ala Val Ala Gly Ser
 705 Phe Ser Cys Thr Met 710 Lys Phe Thr Val Arg Asp Cys Asp Pro Asn Thr
 Gly Val Pro Asp 725 Glu Asp Gly Tyr Asp 730 Glu Tyr Val Leu Glu Asp
 Leu Glu 740 Thr Val Ser Asp His 745 Ile Gln Lys Val Leu 750 Lys Pro Asn
 Phe Ala 755 Ala Ala Trp Glu Glu 760 Val Gly Asp Thr Phe Glu Lys Glu Glu
 Thr 770 Phe Ala Leu Ser Ser 775 Thr Lys Thr Leu Glu 780 Ala Val Asn Asn
 785 Ile Ile Thr Phe Leu 805 Gly Met Gln Pro Cys 810 Glu Arg Ser Asp Lys Val
 Pro Glu Asn 820 Lys Asn Ser His Ser Leu Tyr Leu Ala Gly Ile Phe Arg
 Gly Gly Tyr Asp Leu Leu Val Arg 825 Ser Arg Leu Ala Leu 830 Ala Asp Gly
 Val Thr Met Gln Val Thr Val Arg 840 Ser Lys Glu Arg Thr Pro Val Asp
 850 Val Ile Leu Ala Ser Val Gly 860
 865

<210> 81
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 <212> PRT
 <213> homo sapiens
 <400> 81

Met Ala Glu Gly Gly Ala Ser Lys Gly Gly Gly Glu Glu Pro Gly Lys
 1 Leu Pro Glu Pro 5 Ala Glu Glu Glu Ser 10 Gln Val Leu Arg Gly Thr Gly
 His Cys Lys Trp Phe Asn Val Arg Met Gly Phe Gly Phe Ile Ser Met
 35 Ile Asn Arg Glu Gly Ser Pro 40 Leu Asp Ile Pro Val Asp Val Phe Val
 50 His Gln Ser Lys Leu Phe 55 Met Glu Gly Phe Arg 60 Ser Leu Lys Glu Gly
 65 Glu Pro Val Glu Phe Thr Phe Lys Lys Ser Ser Lys Gly Leu Glu Ser
 85 Ile Arg Val Thr Gly Pro Gly Gly Ser 90 Pro Cys Leu Gly Ser Glu Arg
 100 Arg Pro Lys Gly Lys Thr Leu Gln 105 Lys Arg Lys Pro Lys Gly Asp Arg
 115 Cys Tyr Asn Cys Gly Gly Leu Asp His His Ala Lys Glu Cys Ser Leu
 130 Pro Pro Gln Pro Lys 135 Cys His Tyr Cys Gln Ser Ile Met His Met
 145 Val Ala Asn Cys Pro 150 Lys Asn Val Ala Gln Pro Pro Ala Ser Ser
 165 Gln Gly Arg Gln Glu Ala Glu Ser Gln Pro Cys Thr Ser Thr Leu Pro
 180 Arg Glu Val Gly Gly Gly His Gly 185 Cys Thr Ser Pro Pro Phe Pro Gln
 195 Glu Ala Arg Ala Glu Ile Ser 200 Glu Arg Ser Gly Arg Ser Pro Gln Glu
 210 Ala Ser Ser Thr Lys Ser Ser Ile Ala Pro Glu Glu Gln Ser Lys Lys
 225 Gly Pro Ser Val Gln Lys Arg Lys Lys Thr 235
 245

<210> 82

<211> 210
 <212> PRT
 <213> homo sapiens
 <400> 82

Met	Gly	Phe	Gly	Phe	Ile	Ser	Met	Ile	Asn	Arg	Glu	Gly	Ser	Pro	Leu
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Asp	Ile	Pro	Val	Asp	Val	Phe	Val	His	Gln	Ser	Lys	Leu	Phe	Met	Glu
			20					25					30		
Gly	Phe	Arg	Ser	Leu	Lys	Glu	Gly	Glu	Pro	Val	Glu	Phe	Thr	Phe	Lys
		35					40					45			
Lys	Ser	Ser	Lys	Gly	Leu	Glu	Ser	Ile	Arg	Val	Thr	Gly	Pro	Gly	Gly
	50					55					60				
Ser	Pro	Cys	Leu	Gly	Ser	Glu	Arg	Arg	Pro	Lys	Gly	Lys	Thr	Leu	Gln
65					70					75					80
Lys	Arg	Lys	Pro	Lys	Gly	Asp	Arg	Cys	Tyr	Asn	Cys	Gly	Gly	Leu	Asp
				85					90					95	
His	His	Ala	Lys	Glu	Cys	Ser	Leu	Pro	Pro	Gln	Pro	Lys	Lys	Cys	His
			100					105					110		
Tyr	Cys	Gln	Ser	Ile	Met	His	Met	Val	Ala	Asn	Cys	Pro	His	Lys	Asn
		115					120					125			
Val	Ala	Gln	Pro	Pro	Ala	Ser	Ser	Gln	Gly	Arg	Gln	Glu	Ala	Glu	Ser
	130					135					140				
Gln	Pro	Cys	Thr	Ser	Thr	Leu	Pro	Arg	Glu	Val	Gly	Gly	Gly	His	Gly
145					150					155					160
Cys	Thr	Ser	Pro	Pro	Phe	Pro	Gln	Glu	Ala	Arg	Ala	Glu	Ile	Ser	Glu
				165					170					175	
Arg	Ser	Gly	Arg	Ser	Pro	Gln	Glu	Ala	Ser	Ser	Thr	Lys	Ser	Ser	Ile
			180					185					190		
Ala	Pro	Glu	Glu	Gln	Ser	Lys	Lys	Gly	Pro	Ser	Val	Gln	Lys	Arg	Lys
		195					200					205			
Lys	Thr														
	210														

<210> 83
 <211> 391
 <212> PRT
 <213> homo sapiens
 <400> 83

Met	Arg	Gln	Leu	Cys	Arg	Gly	Arg	Val	Leu	Gly	Ile	Ser	Val	Ala	Ile
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Ala	His	Gly	Val	Phe	Ser	Gly	Ser	Leu	Asn	Ile	Leu	Leu	Lys	Phe	Leu
			20					25					30		
Ile	Ser	Arg	Tyr	Gln	Phe	Ser	Phe	Leu	Thr	Leu	Val	Gln	Cys	Leu	Thr
		35					40					45			
Ser	Ser	Thr	Ala	Ala	Leu	Ser	Leu	Glu	Leu	Leu	Arg	Arg	Leu	Gly	Leu
	50					55					60				
Ile	Ala	Val	Pro	Pro	Phe	Gly	Leu	Ser	Leu	Ala	Arg	Ser	Phe	Ala	Gly
65					70					75					80
Val	Ala	Val	Leu	Ser	Thr	Leu	Gln	Ser	Ser	Leu	Thr	Leu	Trp	Ser	Leu
				85					90					95	
Arg	Gly	Leu	Ser	Leu	Pro	Met	Tyr	Val	Val	Phe	Lys	Arg	Cys	Leu	Pro
			100					105					110		
Leu	Val	Thr	Met	Leu	Ile	Gly	Val	Leu	Val	Leu	Lys	Asn	Gly	Ala	Pro
		115					120					125			
Ser	Pro	Gly	Val	Leu	Ala	Ala	Val	Leu	Ile	Thr	Thr	Cys	Gly	Ala	Ala
	130					135					140				
Leu	Ala	Gly	Ala	Gly	Asp	Leu	Thr	Gly	Asp	Pro	Ile	Gly	Tyr	Val	Thr
145					150					155					160
Gly	Val	Leu	Ala	Val	Leu	Val	His	Ala	Ala	Tyr	Leu	Val	Leu	Ile	Gln
				165					170					175	
Lys	Ala	Ser	Ala	Asp	Thr	Glu	His	Gly	Pro	Leu	Thr	Ala	Gln	Tyr	Val
			180					185					190		
Ile	Ala	Val	Ser	Ala	Thr	Pro	Leu	Leu	Val	Ile	Cys	Ser	Phe	Ala	Ser
		195					200					205			
Thr	Asp	Ser	Ile	His	Ala	Trp	Thr	Phe	Pro	Gly	Trp	Lys	Asp	Pro	Ala

210	Met	Val	Cys	Ile	Phe	215	Val	Ala	Cys	Ile	Leu	Ile	220	Gly	Cys	Ala	Met	Asn
225	Phe	Thr	Thr	Leu	His	230	Cys	Thr	Tyr	Ile	Asn	235	Ser	Ala	Val	Thr	Thr	240
					245						250						255	
	Leu	Phe	Ile	Ala	Gly	260	Val	Val	Val	Asn	Thr	Leu	Gly	Ser	Ile	Ile	Tyr	
										265							270	
	Cys	Val	Ala	Lys	Phe	275	Met	Glu	Thr	Arg	Lys	Gln	Ser	Asn	Tyr	Glu	Asp	
									280								285	
	Leu	Glu	Ala	Gln	Pro	290	Arg	Gly	Glu	Glu	Ala	Gln	Leu	Ser	Gly	Asp	Gln	
									295								300	
	Leu	Pro	Phe	Val	Met	305	Glu	Glu	Leu	Pro	Gly	Glu	Gly	Gly	Asn	Gly	Arg	
																	310	
	Ser	Glu	Gly	Gly	Glu	315	Ala	Ala	Gly	Gly	Pro	Ala	Gln	Glu	Ser	Arg	Gln	
																	320	
																	325	
	Glu	Val	Arg	Gly	Ser	330	Pro	Arg	Gly	Val	Pro	Leu	Val	Ala	Gly	Ser	Ser	
																	335	
	Glu	Glu	Gly	Ser	Arg	340	Arg	Ser	Leu	Lys	Asp	Ala	Tyr	Leu	Glu	Val	Trp	
																	345	
	Arg	Leu	Val	Arg	Gly	350	Thr	Arg	Tyr	Met	Lys	Lys	Asp	Tyr	Leu	Ile	Glu	
																	355	
	Asn	Glu	Glu	Leu	Pro	360	Ser	Pro										
																	365	
																	370	
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																	385	
	<210>	84																
	<211>	907																
	<212>	PRT																
	<213>	homo sapiens																
	<400>	84																
Met	Asp	Thr	Ser	Arg	Leu	Gly	Val	Leu	Leu	Ser	Leu	Pro	Val	Leu	Leu			
1				5				10						15				
Gln	Leu	Ala	Thr	Gly	Gly	Ser	Ser	Pro	Arg	Ser	Gly	Val	Leu	Leu	Arg			
			20					25					30					
Gly	Cys	Pro	Thr	His	Cys	His	Cys	Glu	Pro	Asp	Gly	Arg	Met	Leu	Leu			
		35					40					45						
Arg	Val	Asp	Cys	Ser	Asp	Leu	Gly	Leu	Ser	Glu	Leu	Pro	Ser	Asn	Leu			
		50				55					60							
Ser	Val	Phe	Thr	Ser	Tyr	Leu	Asp	Leu	Ser	Met	Asn	Asn	Ile	Ser	Gln			
65					70					75					80			
Leu	Leu	Pro	Asn	Pro	Leu	Pro	Ser	Leu	Arg	Phe	Leu	Glu	Glu	Leu	Arg			
				85				90						95				
Leu	Ala	Gly	Asn	Ala	Leu	Thr	Tyr	Ile	Pro	Lys	Gly	Ala	Phe	Thr	Gly			
			100					105					110					
Leu	Tyr	Ser	Leu	Lys	Val	Leu	Met	Leu	Gln	Asn	Asn	Gln	Leu	Arg	His			
		115					120					125						
Val	Pro	Thr	Glu	Ala	Leu	Gln	Asn	Leu	Arg	Ser	Leu	Gln	Ser	Leu	Arg			
		130				135						140						
Leu	Asp	Ala	Asn	His	Ile	Ser	Tyr	Val	Pro	Pro	Ser	Cys	Phe	Ser	Gly			
145					150					155					160			
Leu	His	Ser	Leu	Arg	His	Leu	Trp	Leu	Asp	Asp	Asn	Ala	Leu	Thr	Glu			
				165					170						175			
Ile	Pro	Val	Gln	Ala	Phe	Arg	Ser	Leu	Ser	Ala	Leu	Gln	Ala	Met	Thr			
			180					185					190					
Leu	Ala	Leu	Asn	Lys	Ile	His	His	Ile	Pro	Asp	Tyr	Ala	Phe	Gly	Asn			
							200					205						
Leu	Ser	Ser	Leu	Val	Val	Leu	His	Leu	His	Asn	Asn	Arg	Ile	His	Ser			
		210				215						220						
Leu	Gly	Lys	Lys	Cys	Phe	Asp	Gly	Leu	His	Ser	Leu	Glu	Thr	Leu	Asp			
225					230					235					240			
Leu	Asn	Tyr	Asn	Asn	Leu	Asp	Glu	Phe	Pro	Thr	Ala	Ile	Arg	Thr	Leu			
				245					250						255			
Ser	Asn	Leu	Lys	Glu	Leu	Gly	Phe	His	Ser	Asn	Asn	Ile	Arg	Ser	Ile			
			260					265					270					
Pro	Glu	Lys	Ala	Phe	Val	Gly	Asn	Pro	Ser	Leu	Ile	Thr	Ile	His	Phe			
		275					280						285					

Tyr	Asp	Asn	Pro	Ile	Gln	Phe	Val	Gly	Arg	Ser	Ala	Phe	Gln	His	Leu
Pro	290	Glu	Leu	Arg	Thr	295	Leu	Asn	Gly	Ala	300	Gln	Ile	Thr	Glu
305					310	Thr	Ala	Asn	315	Glu	Ser	Leu	Thr	Leu	320
Phe	Pro	Asp	Leu	Thr	325	Gly	Thr	Ala	330	Leu	Ser	Leu	Thr	Leu	Thr
Gly	Ala	Gln	Ile	Ser	Ser	Leu	Pro	Gln	Thr	Val	Cys	Asn	Gln	Leu	Pro
Asn	Leu	Gln	Val	Leu	Asp	Leu	Ser	345	Tyr	Asn	Leu	Leu	Glu	Asp	Leu
Ser	355	Phe	Ser	Val	Cys	Gln	Lys	360	Gln	Lys	Ile	Asp	365	Leu	Arg
370															His
Glu	Ile	Tyr	Glu	Ile	Lys	375	Val	Asp	Thr	Phe	Gln	Gln	Leu	Leu	Ser
385					390										Leu
Arg	Ser	Leu	Asn	Leu	Ala	Trp	Asn	Lys	Ile	Ala	Ile	Ile	His	Pro	Asn
Ala	Phe	Ser	Thr	405	Leu	Pro	Ser	Leu	Ile	Lys	Leu	Asp	Leu	Ser	Asn
Leu	Leu	Ser	Ser	420	Phe	Pro	Ile	Thr	425	Gly	Leu	His	Gly	Leu	Thr
Lys	Leu	Thr	Gly	435	Asn	His	Ala	Leu	Gln	Ser	Leu	Ile	Ser	Ser	Glu
450															Asn
Phe	Pro	Glu	Leu	Lys	Val	Ile	Glu	Met	Pro	Tyr	Ala	Tyr	Gln	Cys	Cys
465					470					475					480
Ala	Phe	Gly	Val	Cys	Glu	Asn	Ala	Tyr	Lys	Ile	Ser	Asn	Gln	Trp	Asn
Lys	Gly	Asp	Asn	485	Ser	Ser	Met	Asp	505	Leu	His	Lys	Lys	Asp	Ala
Met	Phe	Gln	Ala	500	Gln	Asp	Glu	Arg	510	Asp	Leu	Glu	Asp	Phe	Leu
515															Asp
Phe	Glu	Glu	Asp	515	Leu	Lys	Ala	Leu	His	Ser	Val	Gln	Cys	Ser	Pro
530															Ser
Pro	Gly	Pro	Phe	Lys	Pro	Cys	Glu	His	Leu	Leu	Asp	Gly	Trp	Leu	Ile
545					550					555					560
Arg	Ile	Gly	Val	Trp	Thr	Ile	Ala	Val	Leu	Ala	Leu	Thr	Cys	Asn	Ala
Leu	Val	Thr	Ser	565	Thr	Val	Phe	Arg	Ser	Pro	Leu	Tyr	Ile	Ser	Pro
Lys	Leu	Leu	Ile	580	Gly	Val	Ile	Ala	585	Val	Asn	Met	Leu	Thr	Gly
Ser	Ser	Ala	Val	595	Leu	Ala	Gly	Val	600	Asp	Ala	Phe	Thr	Phe	Gly
610															Ser
Ala	Arg	His	Gly	Ala	Trp	Trp	Glu	Asn	Gly	Val	Gly	Cys	His	Val	Ile
625					630					635					640
Gly	Phe	Leu	Ser	Ile	645	Phe	Ala	Ser	Glu	Ser	Val	Phe	Leu	Leu	Thr
Leu	Ala	Ala	Leu	Glu	Arg	Gly	Phe	Ser	650	Val	Lys	Tyr	Ser	Ala	Lys
Glu	Thr	Lys	Ala	660	Pro	Phe	Ser	Ser	665	Leu	Lys	Val	Ile	Ile	Leu
Ala	Leu	Leu	Ala	675	Leu	Thr	Met	Ala	680	Ala	Val	Pro	Leu	Gly	Gly
Lys	Tyr	Gly	Ala	690	Ser	Pro	Leu	Cys	Leu	Pro	Leu	Pro	Phe	Gly	Glu
705					710					715					Pro
Ser	Thr	Met	Gly	Tyr	Met	Val	Ala	Leu	Ile	Leu	Leu	Asn	Ser	Leu	Cys
Phe	Leu	Met	Met	725	Ile	Ala	Tyr	Thr	730	Lys	Leu	Tyr	Cys	Asn	Leu
Lys	Gly	Asp	Leu	740	Glu	Asn	Ile	Trp	745	Asp	Cys	Ser	Met	Val	Lys
Ala	Leu	Leu	Leu	755	Phe	Thr	Asn	Cys	760	Ile	Leu	Asn	Cys	Pro	Val
Leu	770	Ser	Phe	Ser	Ser	Leu	775	Ile	Asn	Leu	Thr	Phe	Ile	Ser	Pro
785					790										Glu
															Val
															800

Ile	Lys	Phe	Ile	Leu	Leu	Val	Val	Val	Pro	Leu	Pro	Ala	Cys	Leu	Asn
Pro	Leu	Leu	Tyr	805	Ile	Leu	Phe	Asn	810	His	Phe	Lys	Glu	815	Val
Ser	Leu	Arg	Lys	820	Gln	Thr	Tyr	Val	825	Trp	Thr	Arg	Ser	Lys	830
Leu	Met	Ser	Ile	835	Asn	Ser	Asp	Asp	840	Val	Glu	Lys	Gln	Ser	845
Thr	850	Gln	Ala	Leu	Val	Thr	Phe	Thr	855	Ser	Ser	Ser	Ile	Thr	860
865	Pro	Pro	Ser	Ser	Val	Pro	Ser	Pro	Ala	Tyr	Pro	Val	Thr	Glu	875
His	Leu	Ser	Ser	885	Val	Ala	Phe	Val	890	Cys	Leu				895
			900						905						

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Pro	Val	Ser	Thr	20	Thr	Pro	Val	Ala	25	Ser	Glu	Ala	Ser	Thr	30
Thr	Thr	Pro	Val	35	Asp	Ser	Asn	Thr	40	Phe	Val	Thr	Ser	Ser	45
Ser	Ser	Ser	Pro	50	Ala	Thr	Leu	Gln	55	Val	Thr	Thr	Met	Arg	60
Pro	65	Ser	Glu	Gly	Ser	70	Ser	Leu	Thr	Thr	Met	75	Leu	Ser	80
Tyr	Val	Thr	Ser	85	Ser	Glu	Ala	Ser	Thr	Pro	Ser	Thr	Pro	Ser	90
Arg	Ser	Thr	Pro	100	Val	Thr	Thr	Ser	105	Gln	Ser	Asn	Ser	Thr	110
Pro	Pro	Glu	Val	115	Ile	Thr	Leu	Pro	120	Met	Ser	Thr	Pro	Ser	125
Thr	Pro	Leu	Thr	130	Ile	Met	Pro	Val	135	Ser	Thr	Thr	Ser	Val	140
Glu	145	Ala	Gly	Thr	Ala	Ser	150	Thr	Leu	Pro	Val	Asp	Thr	Ser	155
Ile	Thr	Ser	Thr	165	Gln	Val	Ser	Ser	170	Ser	Pro	Val	Thr	Pro	175
Thr	Met	Pro	Ile	180	Trp	Thr	Pro	Ser	185	Glu	Gly	Ser	Thr	Pro	190
Met	Pro	Val	Ser	195	Thr	Thr	Arg	Val	200	Thr	Ser	Ser	Glu	Gly	205
Ser	Thr	Pro	Ser	210	Val	Val	Thr	215	Ser	Thr	Pro	Val	Thr	Thr	220
Ala	225	Ile	Ser	Ser	Ser	Ala	Thr	Leu	230	Asp	Ser	Thr	Thr	Met	235
Met	Pro	Met	Glu	Ile	Ser	Thr	Leu	Gly	245	Thr	Thr	Ile	Leu	Val	250
Thr	Pro	Val	Thr	260	Arg	Phe	Pro	Glu	265	Ser	Thr	Pro	Ser	Ile	270
Val	Tyr	Thr	Ser	275	Met	Ser	Met	Thr	280	Thr	Ala	Ser	Glu	Gly	285
Pro	Thr	Thr	Leu	290	Glu	Gly	Thr	Thr	295	Thr	Met	Pro	Met	Ser	300
Glu	305	Arg	Ser	Thr	Leu	Leu	Thr	Thr	310	Val	Leu	Ile	Ser	Pro	315
Met	Ser	Pro	Ser	325	Glu	Ala	Ser	Thr	330	Leu	Ser	Thr	Pro	Pro	335
Ser	Thr	Pro	Leu	340	Thr	Ser	Thr	Lys	345	Ala	Gly	Ser	Phe	Ser	350
Ala	Glu	Val	Thr	Thr	Ile	Arg	Ile	Ser	Ile	Thr	Ser	Glu	Arg	Ser	Thr

Pro	Leu	355	Thr	Thr	Leu	Leu	Val	360	Ser	Thr	Thr	Leu	Pro	365	Thr	Ser	Phe	Pro
Gly	370	Ala	Ser	Ile	Ala	Ser	375	Thr	Pro	Pro	Leu	Asp	380	Thr	Ser	Thr	Thr	Phe
385	Thr	Pro	Ser	Thr	Asp	390	Thr	Ala	Ser	Thr	Pro	Thr	Ile	Pro	Val	Ala	Thr	
Thr	Ile	Ser	Val	Ser	Val	Ile	Thr	Glu	410	Gly	Ser	Thr	Pro	Gly	415	Thr	Thr	
Ile	Phe	Ile	420	Pro	Ser	Thr	Pro	Val	425	Thr	Ser	Ser	Thr	Ala	430	Asp	Val	Phe
Pro	Ala	435	Thr	Thr	Gly	Ala	Val	Ser	440	Thr	Pro	Val	Ile	445	Thr	Ser	Thr	Glu
Leu	450	Asn	Thr	Pro	Ser	Thr	Ser	Ser	Ser	Thr	460	Thr	Thr	Ser	Phe	Ser		
465	Thr	Thr	Lys	Glu	Phe	470	Thr	Thr	Pro	Ala	Met	475	Thr	Thr	Ala	Ala	Pro	Leu
Thr	Tyr	Val	Thr	Met	Ser	Thr	Ala	Pro	500	Ser	Thr	Pro	Arg	Thr	Thr	Ser		
Arg	Gly	Cys	515	Thr	Thr	Ser	Ala	Ser	520	Thr	Leu	Ser	Ala	Thr	Ser	Thr	Pro	
His	Thr	Ser	Thr	Ser	Val	Thr	535	Ile	Thr	Ser	His	Thr	Ile	Pro	Pro	Thr	Phe	
545	Ser	Ser	Arg	Pro	Ser	Thr	550	Thr	Pro	Pro	Thr	Thr	Ser	Ala	Ser	Ser	Thr	
Pro	Pro	Ala	His	Ser	565	Ser	Thr	Pro	Pro	Thr	570	Thr	Thr	Arg	Thr	Lys	Pro	
Thr	Val	Asn	Pro	Glu	Ala	Val	Thr	Thr	585	Met	Thr	Thr	Thr	Arg	590	Thr	Pro	
Ser	Thr	Arg	Thr	Thr	Ser	Phe	Pro	Thr	600	Val	Thr	Thr	Thr	Thr	Ala	Val	Pro	
Thr	Asn	Thr	Thr	Ile	Lys	Ser	615	Asn	Pro	Thr	Ser	Thr	Pro	Thr	Val	Pro		
Arg	625	Thr	Thr	Cys	Phe	630	Gly	Asp	Gly	Cys	Gln	635	Asn	Thr	Ala	Ser	Arg	
Cys	Lys	Asn	Gly	Gly	Thr	Trp	Asp	Gly	Leu	Lys	Cys	Gln	Cys	Pro	655	Asn		
Leu	Tyr	Tyr	Gly	Glu	Leu	Cys	Glu	Glu	665	Val	Val	Ser	Ser	Ile	Asp	Ile		
Gly	Pro	Pro	Glu	Thr	Ile	Ser	Ala	Gln	680	Met	Glu	Leu	Thr	685	Val	Thr	Val	
Thr	Ser	Val	Lys	Phe	Thr	Glu	Glu	Leu	Lys	Asn	His	Ser	Ser	Gln	Glu			
Phe	690	Gln	Glu	Phe	Lys	Gln	695	Phe	Thr	Glu	Gln	Met	Asn	Ile	Val	Tyr		
705	Ser	Gly	Ile	Pro	Glu	Tyr	Val	Gly	Val	Asn	Ile	Thr	Lys	Leu	Arg	Leu		
Gly	Ser	Val	Val	Val	Glu	His	Asp	Val	730	Leu	Leu	Arg	Thr	Lys	Tyr	Thr		
Pro	Glu	Tyr	Lys	Thr	Val	Leu	Asp	745	Asn	Ala	Thr	Glu	Val	750	Val	Lys	Glu	
Lys	Ile	Thr	Lys	Val	Thr	Thr	Gln	Gln	Ile	Met	Ile	Asn	Asp	Ile	Cys			
Ser	770	Asp	Met	Met	Cys	Phe	Asn	Thr	Thr	Gly	Thr	Gln	Val	Gln	Asn	Ile		
785	Thr	Val	Thr	Gln	Tyr	Asp	Pro	Glu	Glu	Asp	Cys	Arg	Lys	Met	Ala	Lys		
Glu	Tyr	Gly	Asp	Tyr	Phe	Val	Val	Glu	810	Tyr	Arg	Asp	Gln	Lys	Pro	Tyr		
Cys	Ile	Ser	Pro	Cys	Glu	Pro	Gly	Phe	825	Ser	Val	Ser	Lys	Asn	Cys	Asn		
Leu	835	Lys	Cys	Gln	Met	Ser	840	Leu	Ser	Gly	Pro	Gln	Cys	Leu	Cys	Val		
850	Thr	Thr	Glu	Thr	His	Trp	Tyr	Ser	Gly	Glu	Thr	Cys	Asn	Gln	Gly	Thr		

865	Gln	Lys	Ser	Leu	Val	870	Tyr	Gly	Leu	Val	Gly	Ala	Gly	Val	Val	880	Leu	Met
					885						890					895		
	Leu	Ile	Ile	Leu	Val		Ala	Leu	Leu	Met		Val	Phe	Arg	Ser		Lys	Arg
				900						905						910		
	Glu	Val	Lys	Arg	Gln	Lys	Tyr	Arg	Leu	Ser	Gln	Leu	Tyr	Lys	Trp		Gln	
			915					920						925				
	Glu	Glu	Asp	Ser	Gly	Pro	Ala	Pro	Gly	Thr	Phe	Gln	Asn	Ile	Gly	Phe		
		930					935					940						
	Asp	Ile	Cys	Gln	Asp	Asp	Asp	Ser	Ile	His	Leu	Glu	Ser	Ile	Tyr	Ser		
	945					950					955					960		
	Asn	Phe	Gln	Pro	Ser	Leu	Arg	His	Ile	Asp	Pro	Glu	Thr	Lys	Arg	Ser		
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	Glu	Phe	Arg	Gly	Leu	Arg												
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			20					25				30						
Leu	Gly	Trp	Met	Val	His	Pro	Pro	Ser	Gly	Trp	Glu	Glu	Val	Ser	Gly			
		35					40				45							
Tyr	Asp	Glu	Asn	Met	Asn	Thr	Ile	Arg	Thr	Tyr	Gln	Val	Cys	Asn	Val			
	50					55					60							
Phe	Glu	Ser	Ser	Gln	Asn	Asn	Trp	Leu	Arg	Thr	Lys	Phe	Ile	Arg	Arg			
65				70					75						80			
Arg	Gly	Ala	His	Arg	Ile	His	Val	Glu	Met	Lys	Phe	Ser	Val	Arg	Asp			
			85					90						95				
Cys	Ser	Ser	Ile	Pro	Ser	Val	Pro	Gly	Ser	Cys	Lys	Glu	Thr	Phe	Asn			
			100					105					110					
Leu	Tyr	Tyr	Tyr	Glu	Ala	Asp	Phe	Asp	Ser	Ala	Thr	Lys	Thr	Phe	Pro			
		115					120					125						
Asn	Trp	Met	Glu	Asn	Pro	Trp	Val	Lys	Val	Asp	Thr	Ile	Ala	Ala	Asp			
	130					135					140							
Glu	Ser	Phe	Ser	Gln	Val	Asp	Leu	Gly	Gly	Arg	Val	Met	Lys	Ile	Asn			
145				150						155					160			
Thr	Glu	Val	Arg	Ser	Phe	Gly	Pro	Val	Ser	Arg	Ser	Gly	Phe	Tyr	Leu			
			165						170					175				
Ala	Phe	Gln	Asp	Tyr	Gly	Gly	Cys	Met	Ser	Leu	Ile	Ala	Val	Arg	Val			
			180					185					190					
Phe	Tyr	Arg	Lys	Cys	Pro	Arg	Ile	Gln	Asn	Gly	Ala	Ile	Phe	Gln				
		195					200				205							
Glu	Thr	Leu	Ser	Gly	Ala	Glu	Ser	Thr	Ser	Leu	Val	Ala	Ala	Arg	Gly			
		210				215					220							
Ser	Cys	Ile	Ala	Asn	Ala	Glu	Glu	Val	Asp	Val	Pro	Ile	Lys	Leu	Tyr			
225				230					235						240			
Cys	Asn	Gly	Asp	Gly	Glu	Trp	Leu	Val	Pro	Ile	Gly	Arg	Cys	Met	Cys			
			245						250					255				
Lys	Ala	Gly	Phe	Glu	Ala	Val	Glu	Asn	Gly	Thr	Val	Cys	Arg	Gly	Cys			
			260					265					270					
Pro	Ser	Gly	Thr	Phe	Lys	Ala	Asn	Gln	Gly	Asp	Glu	Ala	Cys	Thr	His			
		275					280					285						
Cys	Pro	Ile	Asn	Ser	Arg	Thr	Thr	Ser	Glu	Gly	Ala	Thr	Asn	Cys	Val			
		290				295					300							
Cys	Arg	Asn	Gly	Tyr	Tyr	Arg	Ala	Asp	Leu	Asp	Pro	Leu	Asp	Met	Pro			
305				310						315					320			
Cys	Thr	Thr	Ile	Pro	Ser	Ala	Pro	Gln	Ala	Val	Ile	Ser	Ser	Val	Asn			
			325						330					335				
Glu	Thr	Ser	Leu	Met	Leu	Glu	Trp	Thr	Pro	Pro	Arg	Asp	Ser	Gly	Gly			
			340					345					350					

Arg	Glu	Asp	Leu	Val	Tyr	Asn	Ile	Ile	Cys	Lys	Ser	Cys	Gly	Ser	Gly
		355					360					365			
Arg	Gly	Ala	Cys	Thr	Arg	Cys	Gly	Asp	Asn	Val	Gln	Tyr	Ala	Pro	Arg
	370					375					380				
Gln	Leu	Gly	Leu	Thr	Glu	Pro	Arg	Ile	Tyr	Ile	Ser	Asp	Leu	Leu	Ala
385					390					395					400
His	Thr	Gln	Tyr	Thr	Phe	Glu	Ile	Gln	Ala	Val	Asn	Gly	Val	Thr	Asp
			405						410					415	
Gln	Ser	Pro	Phe	Ser	Pro	Gln	Phe	Ala	Ser	Val	Asn	Ile	Thr	Thr	Asn
			420					425					430		
Gln	Ala	Ala	Pro	Ser	Ala	Val	Ser	Ile	Met	His	Gln	Val	Ser	Arg	Thr
		435					440					445			
Val	Asp	Ser	Ile	Thr	Leu	Ser	Trp	Ser	Gln	Pro	Asp	Gln	Pro	Asn	Gly
	450					455					460				
Val	Ile	Leu	Asp	Tyr	Glu	Leu	Gln	Tyr	Tyr	Glu	Lys	Glu	Leu	Ser	Glu
465					470					475					480
Tyr	Asn	Ala	Thr	Ala	Ile	Lys	Ser	Pro	Thr	Asn	Thr	Val	Thr	Val	Gln
				485					490					495	
Gly	Leu	Lys	Ala	Gly	Ala	Ile	Tyr	Val	Phe	Gln	Val	Arg	Ala	Arg	Thr
			500					505					510		
Val	Ala	Gly	Tyr	Gly	Arg	Tyr	Ser	Gly	Lys	Met	Tyr	Phe	Gln	Thr	Met
		515					520					525			
Thr	Glu	Ala	Glu	Tyr	Gln	Thr	Ser	Ile	Gln	Glu	Lys	Leu	Pro	Leu	Ile
	530					535					540				
Ile	Gly	Ser	Ser	Ala	Ala	Gly	Leu	Val	Phe	Leu	Ile	Ala	Val	Val	Val
545					550					555					560
Ile	Ala	Ile	Val	Cys	Asn	Arg	Arg	Arg	Gly	Phe	Glu	Arg	Ala	Asp	Ser
				565					570					575	
Glu	Tyr	Thr	Asp	Lys	Leu	Gln	His	Tyr	Thr	Ser	Gly	His	Met	Thr	Pro
			580					585					590		
Gly	Met	Lys	Ile	Tyr	Ile	Asp	Pro	Phe	Thr	Tyr	Glu	Asp	Pro	Asn	Glu
		595				600						605			
Ala	Val	Arg	Glu	Phe	Ala	Lys	Glu	Ile	Asp	Ile	Ser	Cys	Val	Lys	Ile
	610					615					620				
Glu	Gln	Val	Ile	Gly	Ala	Gly	Glu	Phe	Gly	Glu	Val	Cys	Ser	Gly	His
625					630					635					640
Leu	Lys	Leu	Pro	Gly	Lys	Arg	Glu	Ile	Phe	Val	Ala	Ile	Lys	Thr	Leu
				645					650					655	
Lys	Ser	Gly	Tyr	Thr	Glu	Lys	Gln	Arg	Asp	Phe	Leu	Ser	Glu	Ala	
			660					665				670			
Ser	Ile	Met	Gly	Gln	Phe	Asp	His	Pro	Asn	Val	Ile	His	Leu	Glu	Gly
		675					680					685			
Val	Val	Thr	Lys	Ser	Thr	Pro	Val	Met	Ile	Ile	Thr	Glu	Phe	Met	Glu
	690					695					700				
Asn	Gly	Ser	Leu	Asp	Ser	Phe	Leu	Arg	Gln	Asn	Asp	Gly	Gln	Phe	Thr
705					710					715					720
Val	Ile	Gln	Leu	Val	Gly	Met	Leu	Arg	Gly	Ile	Ala	Ala	Gly	Met	Lys
				725					730					735	
Tyr	Leu	Ala	Asp	Met	Asn	Tyr	Val	His	Arg	Asp	Leu	Ala	Ala	Arg	Asn
			740					745					750		
Ile	Leu	Val	Asn	Ser	Asn	Leu	Val	Cys	Lys	Val	Ser	Asp	Phe	Gly	Leu
		755					760					765			
Ser	Arg	Phe	Leu	Glu	Asp	Asp	Thr	Ser	Asp	Pro	Thr	Tyr	Thr	Ser	Ala
	770					775					780				
Leu	Gly	Gly	Lys	Ile	Pro	Ile	Arg	Trp	Thr	Ala	Pro	Glu	Ala	Ile	Gln
785					790					795					800
Tyr	Arg	Lys	Phe	Thr	Ser	Ala	Ser	Asp	Val	Trp	Ser	Tyr	Gly	Ile	Val
				805					810					815	
Met	Trp	Glu	Val	Met	Ser	Tyr	Gly	Glu	Arg	Pro	Tyr	Trp	Asp	Met	Thr
			820					825					830		
Asn	Gln	Asp	Val	Ile	Asn	Ala	Ile	Glu	Gln	Asp	Tyr	Arg	Leu	Pro	Pro
		835					840					845			
Pro	Met	Asp	Cys	Pro	Ser	Ala	Leu	His	Gln	Leu	Met	Leu	Asp	Cys	Trp
	850					855					860				

Gln 865	Lys	Asp	Arg	Asn 870	His 870	Arg	Pro	Lys	Phe	Gly 875	Gln	Ile	Val	Asn	Thr 880
Leu	Asp	Lys	Met	Ile 885	Arg	Asn	Pro	Asn	Ser 890	Leu	Lys	Ala	Met	Ala 895	Pro
Leu	Ser	Ser	Gly 900	Ile	Asn	Leu	Pro	Leu 905	Leu	Asp	Arg	Thr	Ile 910	Pro	Asp
Tyr	Thr	Ser 915	Phe	Asn	Thr	Val	Asp 920	Glu	Trp	Leu	Glu	Ala 925	Ile	Lys	Met
Gly	Gln 930	Tyr	Lys	Glu	Ser	Phe 935	Ala	Asn	Ala	Gly	Phe	Thr	Ser	Phe	Asp
Val 945	Val	Ser	Gln	Met	Met 950	Met	Glu	Asp	Ile	Leu 955	Arg	Val	Gly	Val	Thr 960
Leu	Ala	Gly	His	Gln 965	Lys	Lys	Ile	Leu	Asn 970	Ser	Ile	Gln	Val	Met 975	Arg
Ala	Gln	Met	Asn 980	Gln	Ile	Gln	Ser	Val 985	Glu	Val					

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Glu	Leu	Pro	Val	Val	Val	Lys	Glu 40	Leu	Pro	Glu	Gly	Trp 45	Ser	Leu	Pro
Ser	Tyr 50	Val	Ser	Val	Leu	Val 55	Ala	Leu	Gly	Asn	Leu 60	Gly	Leu	Leu	Val
Val 65	Thr	Leu	Trp	Arg	Arg 70	Leu	Ala	Pro	Gly	Lys 75	Asp	Glu	Gln	Val	Pro 80
Ile	Arg	Val	Val	Gln 85	Val	Leu	Gly	Met 90	Val	Gly	Thr	Ala	Leu	Leu 95	Ala
Ser	Leu	Trp	His 100	His	Val	Ala	Pro	Val 105	Ala	Gly	Gln	Leu	His 110	Ser	Val
Ala	Phe	Leu	Ala	Leu	Ala	Phe	Val 120	Leu	Ala	Leu	Ala	Cys 125	Cys	Ala	Ser
Asn	Val 130	Thr	Phe	Leu	Pro	Phe 135	Leu	Ser	His	Leu	Pro 140	Pro	Arg	Phe	Leu
Arg 145	Ser	Phe	Phe	Leu	Gly 150	Gln	Gly	Leu	Ser	Ala 155	Leu	Leu	Pro	Cys	Val 160
Leu	Ala	Leu	Val	Gln 165	Gly	Val	Gly	Arg	Leu	Glu 170	Cys	Pro	Pro	Ala	Pro 175
Ile	Asn	Gly	Thr 180	Pro	Gly	Pro	Pro	Leu 185	Asp	Phe	Leu	Glu	Arg 190	Phe	Pro
Ala	Ser	Thr 195	Phe	Phe	Trp	Ala	Leu 200	Thr	Ala	Leu	Leu	Val 205	Ala	Ser	Ala
Ala	Ala 210	Phe	Gln	Gly	Leu	Leu 215	Leu	Leu	Leu	Pro	Pro 220	Pro	Pro	Ser	Val
Pro 225	Thr	Gly	Glu	Leu	Gly 230	Ser	Gly	Leu	Gln	Val 235	Gly	Ala	Pro	Gly	Ala 240
Glu	Glu	Glu	Val	Glu 245	Glu	Ser	Ser	Pro	Leu 250	Gln	Glu	Pro	Pro	Ser	Gln 255
Ala	Ala	Gly	Thr 260	Thr	Pro	Gly	Pro	Asp 265	Pro	Lys	Ala	Tyr	Gln 270	Leu	Leu
Ser	Ala	Arg 275	Ser	Ala	Cys	Leu	Leu 280	Gly	Leu	Leu	Ala	Ala 285	Thr	Asn	Ala
Leu	Thr 290	Asn	Gly	Val	Leu	Pro 295	Ala	Val	Gln	Ser	Phe 300	Ser	Cys	Leu	Pro
Tyr 305	Gly	Arg	Leu	Ala	Tyr 310	His	Leu	Ala	Val	Val 315	Leu	Gly	Ser	Ala	Ala 320
Asn	Pro	Leu	Ala	Cys 325	Phe	Leu	Ala	Met	Gly 330	Val	Leu	Cys	Arg	Ser	Leu 335
Ala	Gly	Leu	Gly	Gly	Leu	Ser	Leu	Leu	Gly	Val	Phe	Cys	Gly	Gly	Tyr

Leu	Met	Ala	340	Leu	Ala	Val	Leu	Ser	345	Pro	Cys	Pro	Pro	Leu	350	Val	Gly	Thr
Ser	Ala	355	Gly	Val	Val	Leu	Val	360	Val	Leu	Ser	Trp	Val	365	Leu	Cys	Leu	Gly
Val	Phe	370	Ser	Tyr	Val	Lys	Val	375	Ala	Ala	Ser	Ser	Leu	380	Leu	His	Gly	Gly
385	Gly	Arg	Pro	Ala	Leu	405	Leu	Ala	Ala	Gly	Val	410	Ala	Ile	Gln	Val	Gly	400
Leu	Leu	Gly	Ala	420	Val	Ala	Met	Phe	Pro	425	Pro	Thr	Ser	Ile	Tyr	430	His	Val
Phe	His	Ser	Arg	Lys	Asp	Cys	Ala	440	Asp	Pro	Cys	Asp	Ser	445				
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Gln	Leu	Leu	Arg	Leu	Gln	Ala	Phe	40	Ser	Ser	Pro	Val	Pro	Asp	Pro	Tyr		
Arg	Ser	Glu	Asp	Glu	Ser	Ser	Ala	Arg	Phe	Val	Pro	Arg	Tyr	Asn	Phe			
65	Thr	Arg	Gly	Asp	Leu	70	Arg	Lys	Val	Asp	Phe	75	Asp	Ile	Lys	Gly	Asp	80
Asp	Leu	Ile	Val	Phe	85	Leu	His	Ile	Gln	Lys	90	Thr	Gly	Gly	Thr	Thr	Phe	
Gly	Arg	His	Leu	Val	Arg	Asn	Ile	Gln	Leu	Glu	Gln	Pro	Cys	Glu	Cys			
Arg	Val	Gly	Gln	Lys	Lys	Cys	Thr	120	Cys	His	Arg	Pro	Gly	Lys	Arg	Glu		
Thr	Trp	130	Leu	Phe	Ser	Arg	Phe	135	Ser	Thr	Gly	Trp	Ser	140	Cys	Gly	Leu	His
Ala	Asp	Trp	Thr	Glu	Leu	150	Thr	Ser	Cys	Val	Pro	Ser	Val	Val	Asp	Gly		
145	Lys	Arg	Asp	Ala	Arg	165	Leu	Arg	Pro	Ser	Arg	Asn	Phe	His	Tyr	Ile	Thr	
Ile	Leu	Arg	Asp	Pro	Val	Ser	Arg	Tyr	185	Leu	Ser	Glu	Trp	Arg	His	Val		
Gln	Arg	Gly	Ala	Thr	Trp	Lys	Ala	200	Ser	Leu	His	Val	Cys	Asp	Gly	Arg		
Pro	Pro	Thr	Ser	Glu	Glu	Leu	Pro	Ser	Cys	Tyr	Thr	220	Gly	Asp	Asp	Trp		
Ser	Gly	Cys	Pro	Leu	Lys	Glu	Phe	Met	Asp	Cys	Pro	Tyr	Asn	Leu	Ala			
225	Asn	Asn	Arg	Gln	Val	Arg	Met	Leu	Ser	Asp	Leu	Thr	Leu	Val	Gly	Cys		
Tyr	Asn	Leu	Ser	Val	Met	Pro	Glu	Lys	265	Gln	Arg	Asn	Lys	Val	Leu	Leu		
Glu	Ser	Ala	Lys	Ser	Asn	Leu	Lys	280	His	Met	Ala	Phe	Phe	Gly	Leu	Thr		
Glu	Phe	Gln	Arg	Lys	Thr	Gln	Tyr	Leu	Phe	Glu	Lys	285	Thr	Phe	Asn	Met		
Asn	Phe	Ile	Ser	Pro	Phe	310	Thr	Gln	Tyr	Asn	Thr	315	Thr	Arg	Ala	Ser	Ser	
305	Val	Glu	Ile	Asn	Glu	Glu	Ile	Gln	Lys	Arg	Ile	Glu	Gly	Leu	Asn	Phe		
Leu	Asp	Met	Glu	Leu	Tyr	Ser	Tyr	Ala	Lys	Asp	Leu	Phe	Leu	Gln	Arg			
Tyr	Gln	Phe	355	Met	Arg	Gln	Lys	Glu	360	His	Gln	Glu	Ala	Arg	Lys	Arg		

Gln Glu Gln Arg Lys Phe Leu Lys Gly Arg Leu Leu Gln Thr His Phe
 370 375 380
 Gln Ser Gln Gly Gln Gly Gln Ser Gln Asn Pro Asn Gln Asn Gln Ser
 385 390 395
 Gln Asn Pro Asn Pro Asn Ala Asn Gln Asn Leu Thr Gln Asn Leu Met
 405 410 415
 Gln Asn Leu Thr Gln Ser Leu Ser Gln Lys Glu Asn Arg Glu Ser Pro
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 Lys Gln Asn Ser Gly Lys Glu Gln Asn Asp Asn Thr Ser Asn Gly Thr
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 Asn Asp Tyr Ile Gly Ser Val Glu Lys Trp Arg
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Met Glu Ala Gly Glu Gly Lys Glu Arg Val Pro Lys Gln Arg Gln Val
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 Arg His Tyr Ser Val Ala Glu Glu Thr Glu Ser Gly Ser Phe Val Ala
 35 40 45
 Asn Leu Leu Lys Asp Leu Gly Leu Glu Ile Gly Glu Leu Ala Val Arg
 50 55 60
 Gly Ala Arg Val Val Ser Lys Gly Lys Lys Met His Leu Gln Phe Asp
 65 70 75 80
 Arg Gln Thr Gly Asp Leu Leu Leu Asn Glu Lys Leu Asp Arg Glu Glu
 85 90 95
 Leu Cys Gly Pro Thr Glu Pro Cys Val Leu Pro Phe Gln Val Leu Leu
 100 105 110
 Glu Asn Pro Leu Gln Phe Phe Gln Ala Glu Leu Arg Ile Arg Asp Val
 115 120 125
 Asn Asp His Ser Pro Val Phe Leu Asp Lys Glu Ile Leu Leu Lys Ile
 130 135 140
 Pro Glu Ser Ile Thr Pro Gly Thr Thr Phe Leu Ile Glu Arg Ala Gln
 145 150 155 160
 Asp Leu Asp Val Gly Thr Asn Ser Leu Gln Asn Tyr Thr Ile Ser Pro
 165 170 175
 Asn Phe His Phe His Leu Asn Leu Gln Asp Ser Leu Asp Gly Ile Ile
 180 185 190
 Leu Pro Gln Leu Val Leu Asn Arg Ala Leu Asp Arg Glu Glu Gln Pro
 195 200 205
 Glu Ile Arg Leu Thr Leu Thr Ala Leu Asp Gly Gly Ser Pro Pro Arg
 210 215 220
 Ser Gly Thr Ala Leu Val Arg Ile Glu Val Val Asp Ile Asn Asp Asn
 225 230 235 240
 Val Pro Glu Phe Ala Lys Leu Leu Tyr Glu Val Gln Ile Pro Glu Asp
 245 250 255
 Ser Pro Val Gly Ser Gln Val Ala Ile Val Ser Ala Arg Asp Leu Asp
 260 265 270
 Ile Gly Thr Asn Gly Glu Ile Ser Tyr Ala Phe Ser Gln Ala Ser Glu
 275 280 285
 Asp Ile Arg Lys Thr Phe Arg Leu Ser Ala Lys Ser Gly Glu Leu Leu
 290 295 300
 Leu Arg Gln Lys Leu Asp Phe Glu Ser Ile Gln Thr Tyr Thr Val Asn
 305 310 315 320
 Ile Gln Ala Thr Asp Gly Gly Gly Leu Ser Gly Thr Cys Val Val Phe
 325 330 335
 Val Gln Val Met Asp Leu Asn Asp Asn Pro Pro Glu Leu Thr Met Ser
 340 345 350
 Thr Leu Ile Asn Gln Ile Pro Glu Asn Leu Gln Asp Thr Leu Ile Ala
 355 360 365
 Val Phe Ser Val Ser Asp Pro Asp Ser Gly Asp Asn Gly Arg Met Val

370	Cys	Ser	Ile	Gln	Asp	Asp	Leu	Pro	Phe	Phe	Leu	Lys	Pro	Ser	Val	Glu
385	Asn	Phe	Tyr	Thr	Leu	Val	Ile	Ser	Thr	Ala	Leu	Asp	Arg	Glu	Thr	Arg
	Ser	Glu	Tyr	Asn	Ile	Thr	Ile	Thr	Val	Thr	Asp	Phe	Gly	Thr	Pro	Arg
	Leu	Lys	Thr	Glu	His	Asn	Ile	Thr	Val	Leu	Val	Ser	Asp	Val	Asn	Asp
	Asn	Ala	Pro	Ala	Phe	Thr	Gln	Thr	Ser	Tyr	Thr	Leu	Phe	Val	Arg	Glu
	Asn	Asn	Ser	Pro	Ala	Leu	His	Ile	Gly	Ser	Val	Ser	Ala	Thr	Asp	Arg
	Asp	Ser	Gly	Thr	Asn	Ala	Gln	Val	Thr	Tyr	Ser	Leu	Leu	Pro	Pro	Gln
	Asp	Pro	His	Leu	Pro	Leu	Ala	Ser	Leu	Val	Ser	Ile	Asn	Ala	Asp	Asn
	Gly	His	Leu	Phe	Ala	Leu	Gln	Ser	Leu	Asp	Tyr	Glu	Ala	Leu	Gln	Ala
	Phe	Glu	Phe	Arg	Val	Gly	Ala	Ala	Asp	Arg	Gly	Ser	Pro	Ala	Leu	Ser
	Ser	Glu	Ala	Leu	Val	Arg	Val	Leu	Val	Leu	Asp	Ala	Asn	Asp	Asn	Ser
	Pro	Phe	Val	Leu	Tyr	Pro	Leu	Gln	Asn	Gly	Ser	Ala	Pro	Cys	Thr	Glu
	Leu	Val	Pro	Arg	Ala	Ala	Glu	Pro	Gly	Tyr	Leu	Val	Thr	Lys	Val	Val
	Ala	Val	Asp	Gly	Asp	Ser	Gly	Gln	Asn	Ala	Trp	Leu	Ser	Tyr	Gln	Leu
	Leu	Lys	Ala	Thr	Glu	Pro	Gly	Leu	Phe	Gly	Val	Trp	Ala	His	Asn	Gly
	Glu	Val	Arg	Thr	Ala	Arg	Leu	Leu	Arg	Glu	Arg	Asp	Ala	Ala	Lys	Gln
	Arg	Leu	Val	Val	Leu	Val	Lys	Asp	Asn	Gly	Glu	Pro	Pro	Arg	Ser	Ala
	Thr	Ala	Thr	Leu	His	Val	Leu	Leu	Val	Asp	Gly	Phe	Ser	Gln	Pro	Tyr
	Leu	Leu	Leu	Pro	Glu	Ala	Ala	Pro	Ala	Gln	Ala	Gln	Ala	Asp	Leu	Leu
	Thr	Val	Tyr	Leu	Val	Val	Ala	Leu	Ala	Ser	Val	Ser	Ser	Leu	Phe	Leu
	Phe	Ser	Val	Leu	Leu	Phe	Val	Ala	Val	Arg	Leu	Cys	Arg	Arg	Ser	Arg
	Ala	Ala	Ser	Val	Gly	Arg	Cys	Ser	Val	Pro	Glu	Gly	Pro	Phe	Pro	Gly
	Gln	Met	Val	Asp	Val	Ser	Gly	Thr	Gly	Thr	Leu	Ser	Gln	Ser	Tyr	Gln
	Tyr	Glu	Val	Cys	Leu	Thr	Gly	Gly	Ser	Gly	Thr	Asn	Glu	Phe	Lys	Phe
	Leu	Lys	Pro	Ile	Ile	Pro	Asn	Phe	Val	Ala	Gln	Gly	Ala	Glu	Arg	Val
	Ser	Glu	Ala	Asn	Pro	Ser	Phe	Arg	Lys	Ser	Phe	Glu	Phe	Thr		
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1	Ser	Leu	Glu	Ser	Trp	Ile	Thr	Ala	Gly	Glu	His	Ala	Lys	Glu	Gly	Glu
	Cys	Pro	Pro	His	Lys	Asn	Pro	Cys	Lys	Glu	Leu	Cys	Gln	Gly	Asp	Glu

Leu Cys Pro Ala Glu Gln Lys Cys Cys Thr Thr Gly Cys Gly Arg Ile
 50 55 60
 Cys Arg Asp Ile Pro Lys Gly Arg Lys Arg Asp Cys Pro Arg Val Ile
 65 70 75 80
 Arg Lys Gln Ser Cys Leu Lys Arg Cys Ile Thr Asp Glu Thr Cys Pro
 85 90 95
 Gly Val Lys Lys Cys Cys Thr Leu Gly Cys Asn Lys Ser Cys Val Val
 100 105 110
 Pro Ile Ser Lys Gln Lys Leu Ala Glu Phe Gly Gly Glu Cys Pro Ala
 115 120 125
 Asp Pro Leu Pro Cys Glu Glu Leu Cys Asp Gly Asp Ala Ser Cys Pro
 130 135 140
 Gln Gly His Lys Cys Cys Ser Thr Gly Cys Gly Arg Thr Cys Leu Gly
 145 150 155 160
 Asp Ile Glu Gly Arg Gly Gly Asp Cys Pro Lys Val Leu Val Gly
 165 170 175
 Leu Cys Ile Val Gly Cys Val Met Asp Glu Asn Cys Gln Ala Gly Glu
 180 185 190
 Lys Cys Cys Lys Ser Gly Cys Gly Arg Phe Cys Val Pro Pro Val Leu
 195 200 205
 Pro Pro Lys Leu Thr Met Asn Pro Asn Trp Thr Val Arg Ser Asp Ser
 210 215 220
 Glu Leu Glu Ile Pro Val Pro
 225 230

<210> 91
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Met Leu Ser Ser Thr Asp Phe Thr Phe Ala Ser Trp Glu Leu Val Val
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 Arg Val Asp His Pro Asn Glu Glu Gln Gln Lys Asp Val Thr Leu Arg
 20 25 30
 Val Ser Gly Asp Leu His Val Gly Val Met Leu Lys Leu Val Glu
 35 40 45
 Gln Ile Asn Ile Ser Gln Asp Trp Ser Asp Phe Ala Leu Trp Trp Glu
 50 55 60
 Gln Lys His Cys Trp Leu Leu Lys Thr His Trp Thr Leu Asp Lys Tyr
 65 70 75 80
 Gly Val Gln Ala Asp Ala Lys Leu Leu Phe Thr Pro Gln His Lys Met
 85 90 95
 Leu Arg Leu Arg Leu Pro Asn Leu Lys Met Val Arg Leu Arg Val Ser
 100 105 110
 Phe Ser Ala Val Val Phe Lys Ala Val Ser Asp Ile Cys Lys Ile Leu
 115 120 125
 Asn Ile Arg Arg Ser Glu Glu Leu Ser Leu Leu Lys Pro Ser Gly Asp
 130 135 140
 Tyr Phe Lys Lys Lys Lys Lys Lys Asp Lys Asn Asn Lys Glu Pro Ile
 145 150 155 160
 Ile Glu Asp Ile Leu Asn Leu Glu Ser Ser Pro Thr Ala Ser Gly Ser
 165 170 175
 Ser Val Ser Pro Gly Leu Tyr Ser Lys Thr Met Thr Pro Ile Tyr Asp
 180 185 190
 Pro Ile Asn Gly Thr Pro Ala Ser Ser Thr Met Thr Trp Phe Ser Asp
 195 200 205
 Ser Pro Leu Thr Glu Gln Asn Cys Ser Ile Leu Ala Phe Ser Gln Pro
 210 215 220
 Pro Gln Ser Pro Glu Ala Leu Ala Asp Met Tyr Gln Pro Arg Ser Leu
 225 230 235 240
 Val Asp Lys Ala Lys Leu Asn Ala Gly Trp Leu Asp Ser Ser Arg Ser
 245 250 255
 Leu Met Glu Gln Gly Ile Gln Glu Asp Glu Gln Leu Leu Leu Arg Phe
 260 265 270
 Lys Tyr Tyr Ser Phe Phe Asp Leu Asn Pro Lys Tyr Asp Ala Val Arg

Ile	Asn	Gln	Leu	Tyr	Glu	Gln	Ala	Arg	Trp	Ala	Ile	Leu	Leu	Glu	Glu
290	290	290	290	290	290	295	280	280	280	280	300	285	285	285	285
Ile	Asp	Cys	Thr	Glu	Glu	Glu	Met	Leu	Ile	Phe	Ala	Ala	Leu	Gln	Tyr
305	305	305	305	310	310	310	310	310	315	315	315	315	320	320	320
His	Ile	Ser	Lys	Leu	Ser	Leu	Ser	Ala	Glu	Thr	Gln	Asp	Phe	Ala	Gly
				325					330					335	
Glu	Ser	Glu	Val	Asp	Glu	Ile	Glu	Ala	Ala	Leu	Ser	Asn	Leu	Glu	Val
			340					345					350		
Thr	Leu	Glu	Gly	Gly	Lys	Ala	Asp	Ser	Leu	Leu	Glu	Asp	Ile	Thr	Asp
		355					360					365			
Ile	Pro	Lys	Leu	Ala	Asp	Asn	Leu	Lys	Leu	Phe	Arg	Pro	Lys	Lys	Leu
	370					375					380				
Leu	Pro	Lys	Ala	Phe	Lys	Gln	Tyr	Trp	Phe	Ile	Phe	Lys	Asp	Thr	Ser
385					390					395					400
Ile	Ala	Tyr	Phe	Lys	Asn	Lys	Glu	Leu	Glu	Gln	Gly	Glu	Pro	Leu	Glu
				405					410					415	
Lys	Leu	Asn	Leu	Arg	Gly	Cys	Glu	Val	Val	Pro	Asp	Val	Asn	Val	Ala
				420				425					430		
Gly	Arg	Lys	Phe	Gly	Ile	Lys	Leu	Leu	Ile	Pro	Val	Ala	Asp	Gly	Met
		435					440					445			
Asn	Glu	Met	Tyr	Leu	Arg	Cys	Asp	His	Glu	Asn	Gln	Tyr	Ala	Gln	Trp
	450					455					460				
Met	Ala	Ala	Cys	Met	Leu	Ala	Ser	Lys	Gly	Lys	Thr	Met	Ala	Asp	Ser
465					470					475					480
Ser	Tyr	Gln	Pro	Glu	Val	Leu	Asn	Ile	Leu	Ser	Phe	Leu	Arg	Met	Lys
				485					490					495	
Asn	Arg	Asn	Ser	Ala	Ser	Gln	Val	Ala	Ser	Ser	Leu	Glu	Asn	Met	Asp
			500					505					510		
Met	Asn	Pro	Glu	Cys	Phe	Val	Ser	Pro	Arg	Cys	Ala	Lys	Lys	His	Lys
		515					520					525			
Ser	Lys	Gln	Leu	Ala	Ala	Arg	Ile	Leu	Glu	Ala	His	Gln	Asn	Val	Ala
	530					535					540				
Gln	Met	Pro	Leu	Val	Glu	Ala	Lys	Leu	Arg	Phe	Ile	Gln	Ala	Trp	Gln
545					550					555					560
Ser	Leu	Pro	Glu	Phe	Gly	Leu	Thr	Tyr	Tyr	Leu	Val	Arg	Phe	Lys	Gly
				565					570					575	
Ser	Lys	Lys	Asp	Asp	Ile	Leu	Gly	Val	Ser	Tyr	Asn	Arg	Leu	Ile	Lys
			580					585					590		
Ile	Asp	Ala	Ala	Thr	Gly	Ile	Pro	Val	Thr	Thr	Trp	Arg	Phe	Thr	Asn
		595					600					605			
Ile	Lys	Gln	Trp	Asn	Val	Asn	Trp	Glu	Thr	Arg	Gln	Val	Val	Ile	Glu
	610					615					620				
Phe	Asp	Gln	Asn	Val	Phe	Thr	Ala	Phe	Thr	Cys	Leu	Ser	Ala	Asp	Cys
625					630					635					640
Lys	Ile	Val	His	Glu	Tyr	Ile	Gly	Gly	Tyr	Ile	Phe	Leu	Ser	Thr	Arg
				645					650					655	
Ser	Lys	Asp	Gln	Asn	Glu	Thr	Leu	Asp	Glu	Asp	Leu	Phe	His	Lys	Leu
			660					665					670		
Thr	Gly	Gly	Gln	Asp											
		675													
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1			5					10					15		
Ser	Thr	Lys	Ser	Pro	Ile	Phe	Gly	Pro	Glu	Glu	Val	Asn	Ser	Val	Glu
			20					25				30			
Gly	Asn	Ser	Val	Ser	Ile	Thr	Cys	Tyr	Tyr	Pro	Pro	Thr	Ser	Val	Asn
		35					40					45			
Arg	His	Thr	Arg	Lys	Tyr	Trp	Cys	Arg	Gln	Gly	Ala	Arg	Gly	Gly	Cys
	50					55					60				

Ile	Thr	Leu	Ile	Ser	Ser	Glu	Gly	Tyr	Val	Ser	Ser	Lys	Tyr	Ala	Gly
65					70					75					80
Arg	Ala	Asn	Leu	Thr	Asn	Phe	Pro	Glu	Asn	Gly	Thr	Phe	Val	Val	Asn
				85					90					95	
Ile	Ala	Gln	Leu	Ser	Gln	Asp	Asp	Ser	Gly	Arg	Tyr	Lys	Cys	Gly	Leu
			100					105					110		
Gly	Ile	Asn	Ser	Arg	Gly	Leu	Ser	Phe	Asp	Val	Ser	Leu	Glu	Val	Ser
		115					120					125			
Gln	Gly	Pro	Gly	Leu	Leu	Asn	Asp	Thr	Lys	Val	Tyr	Thr	Val	Asp	Leu
		130				135					140				
Gly	Arg	Thr	Val	Thr	Ile	Asn	Cys	Pro	Phe	Lys	Thr	Glu	Asn	Ala	Gln
145					150					155					160
Lys	Arg	Lys	Ser	Leu	Tyr	Lys	Gln	Ile	Gly	Leu	Tyr	Pro	Val	Leu	Val
				165					170					175	
Ile	Asp	Ser	Ser	Gly	Tyr	Val	Asn	Pro	Asn	Tyr	Thr	Gly	Arg	Ile	Arg
			180					185					190		
Leu	Asp	Ile	Gln	Gly	Thr	Gly	Gln	Leu	Leu	Phe	Ser	Val	Val	Ile	Asn
		195					200					205			
Gln	Leu	Arg	Leu	Ser	Asp	Ala	Gly	Gln	Tyr	Leu	Cys	Gln	Ala	Gly	Asp
		210				215					220				
Asp	Ser	Asn	Ser	Asn	Lys	Lys	Asn	Ala	Asp	Leu	Gln	Val	Leu	Lys	Pro
225					230					235					240
Glu	Pro	Glu	Leu	Val	Tyr	Glu	Asp	Leu	Arg	Gly	Ser	Val	Thr	Phe	His
				245					250					255	
Cys	Ala	Leu	Gly	Pro	Glu	Val	Ala	Asn	Val	Ala	Lys	Phe	Leu	Cys	Arg
			260					265					270		
Gln	Ser	Ser	Gly	Glu	Asn	Cys	Asp	Val	Val	Val	Asn	Thr	Leu	Gly	Lys
		275					280					285			
Arg	Ala	Pro	Ala	Phe	Glu	Gly	Arg	Ile	Leu	Leu	Asn	Pro	Gln	Asp	Lys
		290				295					300				
Asp	Gly	Ser	Phe	Ser	Val	Val	Ile	Thr	Gly	Leu	Arg	Lys	Glu	Asp	Ala
305					310					315					320
Gly	Arg	Tyr	Leu	Cys	Gly	Ala	His	Ser	Asp	Gly	Gln	Leu	Gln	Glu	Gly
				325					330					335	
Ser	Pro	Ile	Gln	Ala	Trp	Gln	Leu	Phe	Val	Asn	Glu	Glu	Ser	Thr	Ile
			340					345					350		
Pro	Arg	Ser	Pro	Thr	Val	Val	Lys	Gly	Val	Ala	Gly	Gly	Ser	Val	Ala
		355					360					365			
Val	Leu	Cys	Pro	Tyr	Asn	Arg	Lys	Glu	Ser	Lys	Ser	Ile	Lys	Tyr	Trp
		370				375					380				
Cys	Leu	Trp	Glu	Gly	Ala	Gln	Asn	Gly	Arg	Cys	Pro	Leu	Leu	Val	Asp
385					390					395					400
Ser	Glu	Gly	Trp	Val	Lys	Ala	Gln	Tyr	Glu	Gly	Arg	Leu	Ser	Leu	Leu
				405					410					415	
Glu	Glu	Pro	Gly	Asn	Gly	Thr	Phe	Thr	Val	Ile	Leu	Asn	Gln	Leu	Thr
			420					425					430		
Ser	Arg	Asp	Ala	Gly	Phe	Tyr	Trp	Cys	Leu	Thr	Asn	Gly	Asp	Thr	Leu
		435					440					445			
Trp	Arg	Thr	Thr	Val	Glu	Ile	Lys	Ile	Ile	Glu	Gly	Glu	Pro	Asn	Leu
		450				455					460				
Lys	Val	Pro	Gly	Asn	Val	Thr	Ala	Val	Leu	Gly	Glu	Thr	Leu	Lys	Val
465					470					475					480
Pro	Cys	His	Phe	Pro	Cys	Lys	Phe	Ser	Ser	Tyr	Glu	Lys	Tyr	Trp	Cys
				485					490					495	
Lys	Trp	Asn	Asn	Thr	Gly	Cys	Gln	Ala	Leu	Pro	Ser	Gln	Asp	Glu	Gly
			500					505					510		
Pro	Ser	Lys	Ala	Phe	Val	Asn	Cys	Asp	Glu	Asn	Ser	Arg	Leu	Val	Ser
		515					520					525			
Leu	Thr	Leu	Asn	Leu	Val	Thr	Arg	Ala	Asp	Glu	Gly	Trp	Tyr	Trp	Cys
		530				535					540				
Gly	Val	Lys	Gln	Gly	His	Phe	Tyr	Gly	Glu	Thr	Ala	Ala	Val	Tyr	Val
545					550					555					560
Ala	Val	Glu	Glu	Arg	Lys	Ala	Ala	Gly	Ser	Arg	Asp	Val	Ser	Leu	Ala
				565					570					575	

Lys Ala Asp Ala Ala Pro Asp Glu Lys Val Leu Asp Ser Gly Phe Arg
 580 585 590
 Glu Ile Glu Asn Lys Ala Ile Gln Asp Pro Arg Leu Phe Ala Glu Glu
 595 600 605
 Lys Ala Val Ala Asp Thr Arg Asp Gln Ala Asp Gly Ser Arg Ala Ser
 610 615 620
 Val Asp Ser Gly Ser Ser Glu Glu Gln Gly Gly Ser Ser Arg Ala Leu
 625 630 635 640
 Val Ser Thr Leu Val Pro Leu Gly Leu Val Leu Ala Val Gly Ala Val
 645 650 655
 Ala Val Gly Val Ala Arg Ala Arg His Arg Lys Asn Val Asp Arg Val
 660 665 670
 Ser Ile Arg Ser Tyr Arg Thr Asp Ile Ser Met Ser Asp Phe Glu Asn
 675 680 685
 Ser Arg Glu Phe Gly Ala Asn Asp Asn Met Gly Ala Ser Ser Ile Thr
 690 695 700
 Gln Glu Thr Ser Leu Gly Gly Lys Glu Glu Phe Val Ala Thr Thr Glu
 705 710 715 720
 Ser Thr Thr Glu Thr Lys Glu Pro Lys Lys Ala Lys Arg Ser Ser Lys
 725 730 735
 Glu Glu Ala Glu Met Ala Tyr Lys Asp Phe Leu Leu Gln Ser Ser Thr
 740 745 750
 Val Ala Ala Glu Ala Gln Asp Gly Pro Gln Glu Ala
 755 760

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Met Lys His Leu Lys Arg Trp Trp Ser Ala Gly Gly Gly Leu Leu His
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 Tyr Leu Leu Leu Pro Pro Pro Thr Leu Leu Gln Asp Glu Leu Leu Phe
 35 40 45
 Leu Gly Gly Pro Ala Ser Ser Ala Tyr Ala Leu Ser Pro Phe Ser Ala
 50 55 60
 Ser Gly Gly Trp Gly Arg Ala Gly His Leu His Pro Lys Gly Arg Glu
 65 70 75 80
 Leu Asp Pro Ala Ala Pro Pro Glu Gly Gln Leu Leu Arg Glu Val Arg
 85 90 95
 Ala Leu Gly Val Pro Phe Val Pro Arg Thr Ser Val Asp Ala Trp Leu
 100 105 110
 Val His Ser Val Ala Ala Gly Ser Ala Asp Glu Ala His Gly Leu Leu
 115 120 125
 Gly Ala Ala Ala Ser Ser Thr Gly Gly Ala Gly Ala Ser Val Asp
 130 135 140
 Gly Gly Ser Gln Ala Val Gln Gly Gly Gly Gly Asp Pro Arg Ala Ala
 145 150 155 160
 Arg Ser Gly Pro Leu Asp Ala Gly Glu Glu Glu Lys Ala Pro Ala Glu
 165 170 175
 Pro Thr Ala Gln Val Pro Asp Ala Gly Gly Cys Ala Ser Glu Glu Asn
 180 185 190
 Gly Val Leu Arg Glu Lys His Glu Ala Val Asp His Ser Ser Gln His
 195 200 205
 Glu Glu Asn Glu Glu Arg Val Ser Ala Gln Lys Glu Asn Ser Leu Gln
 210 215 220
 Gln Asn Asp Asp Asp Glu Asn Lys Ile Ala Glu Lys Pro Asp Trp Glu
 225 230 235 240
 Ala Glu Lys Thr Thr Glu Ser Arg Asn Glu Arg His Leu Asn Gly Thr
 245 250 255
 Asp Thr Ser Phe Ser Leu Glu Asp Leu Phe Gln Leu Leu Ser Ser Gln
 260 265 270
 Pro Glu Asn Ser Leu Glu Gly Ile Ser Leu Gly Asp Ile Pro Leu Pro

Ala Trp Arg Asp Gln Val Asp Trp Ser Ile Leu Leu Arg Asp Ala Gly
 50 55 60
 Leu Val Lys Met Ser Arg Lys Pro Arg Ala Ser Pro Leu Ser Asn
 65 70 75 80
 Asn His Pro Pro Thr Pro Lys Arg Phe Pro Arg Gln Leu Gly Arg Glu
 85 90 95
 Lys Gly Pro Ile Glu Glu Val Pro Gly Thr Lys Gly Ser Pro
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 Met Ala Ser Gly Gln Phe Val Asn Lys Leu Gln Glu Glu Val Ile Cys
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 Pro Ile Cys Leu Asp Ile Leu Gln Lys Pro Val Thr Ile Asp Cys Gly
 20 25 30
 His Asn Phe Cys Leu Lys Cys Ile Thr Gln Ile Gly Glu Thr Ser Cys
 35 40 45
 Gly Phe Phe Lys Cys Pro Leu Cys Lys Thr Ser Val Arg Arg Asp Ala
 50 55 60
 Ile Arg Phe Asn Ser Leu Arg Asn Leu Val Glu Lys Ile Gln Ala
 65 70 75 80
 Leu Gln Ala Ser Glu Val Gln Ser Lys Arg Lys Glu Ala Thr Cys Pro
 85 90 95
 Arg His Gln Glu Met Phe His Tyr Phe Cys Glu Asp Asp Gly Lys Phe
 100 105 110
 Leu Cys Phe Val Cys Arg Glu Ser Lys Asp His Lys Ser His Asn Val
 115 120 125
 Ser Leu Ile Glu Glu Ala Ala Gln Asn Tyr Gln Gly Gln Ile Gln Glu
 130 135 140
 Gln Ile Gln Val Leu Gln Gln Lys Glu Lys Glu Thr Val Gln Val Lys
 145 150 155 160
 Ala Gln Gly Val His Arg Val Asp Val Phe Thr Asp Gln Val Glu His
 165 170 175
 Glu Lys Gln Arg Ile Leu Thr Glu Phe Glu Leu Leu His Gln Val Leu
 180 185 190
 Glu Glu Lys Asn Phe Leu Leu Ser Arg Ile Tyr Trp Leu Gly His
 195 200 205
 Glu Gly Thr Glu Ala Gly Lys His Tyr Val Ala Ser Thr Glu Pro Gln
 210 215 220
 Leu Asn Asp Leu Lys Lys Leu Val Asp Ser Leu Lys Thr Lys Gln Asn
 225 230 235 240
 Met Pro Pro Arg Gln Leu Leu Glu Asp Ile Lys Val Val Leu Cys Arg
 245 250 255
 Ser Glu Glu Phe Gln Phe Leu Asn Pro Thr Pro Val Pro Leu Glu Leu
 260 265 270
 Glu Lys Lys Leu Ser Glu Ala Lys Ser Arg His Asp Ser Ile Thr Gly
 275 280 285
 Ser Leu Lys Lys Phe Lys Asp Gln Leu Gln Ala Asp Arg Lys Lys Asp
 290 295 300
 Glu Asn Arg Phe Phe Lys Ser Met Asn Lys Asn Asp Met Lys Ser Trp
 305 310 315 320
 Gly Leu Leu Gln Lys Asn Asn His Lys Met Asn Lys Thr Ser Glu Pro
 325 330 335
 Gly Ser Ser Ser Ala Gly Gly Arg Thr Thr Ser Gly Pro Pro Asn His
 340 345 350
 His Ser Ser Ala Pro Ser His Ser Leu Phe Arg Ala Ser Ala Gly
 355 360 365
 Lys Val Thr Phe Pro Val Cys Leu Leu Ala Ser Tyr Asp Glu Ile Ser
 370 375 380
 Gly Gln Gly Ala Ser Ser Gln Asp Thr Lys Thr Phe Asp Val Ala Leu
 385 390 395 400
 Ser Glu Glu Leu His Ala Ala Leu Ser Glu Trp Leu Thr Ala Ile Arg

Ala Trp Phe Cys 405 Glu Val Pro Ser Ser 410 415
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 Ala Ser Thr Pro Ala Gly Pro Ile Pro Glu Ala Glu Thr Arg Gly Ala
 35 40 45
 Lys Arg Ile Ser Pro Ala Arg Glu Thr Arg Ser Phe Thr Lys Thr Ser
 50 55 60
 Pro Asn Phe Met Val Leu Ile Ala Thr Ser Val Glu Thr Ser Ala Ala
 65 70 75 80
 Ser Gly Ser Pro Glu Gly Ala Gly Met Thr Thr Val Gln Thr Ile Thr
 85 90 95
 Gly Ser Asp Pro Arg Glu Ala Ile Phe Asp Thr Leu Cys Thr Asp Asp
 100 105 110
 Ile Ser Glu Glu Ala Lys Thr Leu Thr Met Asp Ile Leu Thr Leu Ala
 115 120 125
 His Thr Ser Thr Glu Ala Lys Gly Leu Ser Ser Glu Ser Ser Ala Ser
 130 135 140
 Ser Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg Ala Ser Glu Ser
 145 150 155 160
 Ser Ala Ser Ser Asp Gly Leu His Pro Val Ile Thr Pro Ser Arg Ala
 165 170 175
 Ser Glu Ser Ser Ala Ser Ser Asp Gly Leu His Pro Val Ile Thr Pro
 180 185 190
 Ser Arg Ala Ser Glu Ser Ser Ala Ser Ser Asp Gly Pro His Pro Val
 195 200 205
 Ile Thr Pro Ser Trp Ser Pro Gly Ser Asp Val Thr Leu Leu Ala Glu
 210 215 220
 Ala Leu Val Thr Val Thr Asn Ile Glu Val Ile Asn Cys Ser Ile Thr
 225 230 235 240
 Glu Ile Glu Thr Thr Ser Ser Ile Pro Gly Ala Ser Asp Thr Asp
 245 250 255
 Leu Ile Pro Thr Glu Gly Val Lys Ala Ser Ser Thr Ser Asp Pro Pro
 260 265 270
 Ala Leu Pro Asp Ser Thr Asn Thr Lys Pro His Ile Thr Glu Val Thr
 275 280 285
 Ala Ser Ala Glu Thr Leu Ser Thr Ala Gly Thr Thr Glu Ser Ala Ala
 290 295 300
 Pro Asp Ala Thr Ile Gly Thr Pro Leu Pro Thr Asn Ser Thr Ile Glu
 305 310 315 320
 Arg Glu Val Thr Ala Pro Gly Ala Thr Thr Leu Ser Gly Ala Leu Ala
 325 330 335
 Thr Gly Asn Pro Leu Glu Glu Thr Ser Ala Leu Ser Val Glu Thr Pro
 340 345 350
 Ser Tyr Val Lys Val Ser Gly Ala Ala Pro Val Ser Ile Glu Ala Gly
 355 360 365
 Ser Ala Val Gly Lys Thr Thr Ser Phe Ala Gly Ser Ser Ala Ser Ser
 370 375 380
 Tyr Ser Pro Leu Glu Ala Leu Lys Asn Phe Thr Pro Ser Glu Thr
 385 390 395 400
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 405 410 415
 Pro Leu Pro Ser Val Pro Pro Thr Thr Thr Asn Ser Ser
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<212> PRT
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 Trp Asp Leu Met Thr Phe Asp Ala Asn Pro Tyr Asp Ser Val Lys Lys
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 Ile Lys Glu His Val Arg Ser Lys Thr Lys Val Pro Val Gln Asp Gln
 35 40 45
 Val Leu Leu Leu Gly Ser Lys Ile Leu Lys Pro Arg Arg Ser Leu Ser
 50 55 60
 Ser Tyr Gly Ile Asp Lys Glu Lys Thr Ile His Leu Thr Leu Lys Val
 65 70 75 80
 Val Lys Pro Ser Asp Glu Glu Leu Pro Leu Phe Leu Val Glu Ser Gly
 85 90 95
 Asp Glu Ala Lys Arg His Leu Leu Gln Val Arg Arg Ser Ser Val
 100 105 110
 Ala Gln Val Lys Ala Met Ile Glu Thr Lys Thr Gly Ile Ile Pro Glu
 115 120 125
 Thr Gln Ile Val Thr Cys Asn Gly Lys Arg Leu Glu Asp Gly Lys Met
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 Met Ala Asp Tyr Gly Ile Arg Lys Gly Asn Leu Phe Leu Ala Ser
 145 150 155 160
 Tyr Cys Ile Gly Gly
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 20 25 30
 Glu Ile Asp Val His Thr Ala Phe Phe His Gly Gln Met Leu Thr Thr
 35 40 45
 Arg Gly His His Thr Asp Val Ala Asn Ile Phe Pro Ala Thr Phe Val
 50 55 60
 Thr Ala Glu Met Val Pro Trp Glu Pro Gly Thr Trp Leu Ile Ser Cys
 65 70 75 80
 Gln Val Asn Ser His Phe Arg Asp Gly Met Gln Ala Leu Tyr Lys Val
 85 90 95
 Lys Ser Cys Ser Met Ala Pro Pro Val Asp Leu Leu Thr Gly Lys Val
 100 105 110
 Arg Gln Tyr Phe Ile Glu Ala His Glu Ile Gln Trp Asp Tyr Gly Pro
 115 120 125
 Met Gly His Asp Gly Ser Thr Gly Lys Asn Leu Arg Glu Pro Gly Ser
 130 135 140
 Ile Ser Asp Lys Phe Phe Gln Lys Ser Ser Ser Arg Ile Gly Gly Thr
 145 150 155 160
 Tyr Trp Lys Val Arg Tyr Glu Ala Phe Gln Asp Glu Thr Phe Gln Glu
 165 170 175
 Lys Met His Leu Glu Glu Asp Arg His Leu Gly Ile Leu Gly Pro Val
 180 185 190
 Ile Arg Ala Glu Val Gly Asp Thr Ile Gln Val Val Phe Tyr Asn Arg
 195 200 205
 Ala Ser Gln Pro Phe Ser Met Gln Pro His Gly Val Phe Tyr Glu Lys
 210 215 220
 Asp Tyr Glu Gly Thr Val Tyr Asn Asp Gly Ser Ser Tyr Pro Gly Leu
 225 230 235 240
 Val Ala Lys Pro Phe Glu Lys Val Thr Tyr Arg Trp Thr Val Pro Pro
 245 250 255
 His Ala Gly Pro Thr Ala Gln Asp Pro Ala Cys Leu Thr Trp Met Tyr
 260 265 270

Phe Ser Ala Ala Asp Pro Ile Arg Asp Thr Asn Ser Gly Leu Val Gly
275 280 285
Pro Leu Leu Val Cys Arg Ala Gly Ala Leu Gly Ala Asp Gly Lys Gln
290 295 300
Lys Gly Val Asp Lys Glu Phe Leu Leu Phe Thr Val Leu Asp Glu
305 310 315 320
Asn Lys Ser Trp Tyr Ser Asn Ala Asn Gln Ala Ala Met Leu Asp
325 330 335
Phe Arg Leu Leu Ser Glu Asp Ile Glu Gly Phe Gln Asp Ser Asn Arg
340 345 350
Met His Ala Ile Asn Gly Phe Leu Phe Ser Asn Leu Pro Arg Leu Asp
355 360 365
Met Cys Lys Gly Asp Thr Val Ala Trp His Leu Leu Gly Leu Gly Thr
370 375 380
Glu Thr Asp Val His Gly Val Met Phe Gln Gly Asn Thr Val Gln Leu
385 390 395 400
Gln Gly Met Arg Lys Gly Ala Ala Met Leu Phe Pro His Thr Phe Val
405 410 415
Met Ala Ile Met Gln Pro Asp Asn Leu Gly Thr Phe Glu Ile Tyr Cys
420 425 430
Gln Ala Gly Ser His Arg Glu Ala Gly Met Arg Ala Ile Tyr Asn Val
435 440 445
Ser Gln Cys Pro Gly His Gln Ala Thr Pro Arg Gln Arg Tyr Gln Ala
450 455 460
Ala Arg Ile Tyr Tyr Ile Met Ala Glu Glu Val Glu Trp Asp Tyr Cys
465 470 475 480
Pro Asp Arg Ser Trp Glu Arg Glu Trp His Asn Gln Ser Glu Lys Asp
485 490 495
Ser Tyr Gly Tyr Ile Phe Leu Ser Asn Lys Asp Gly Leu Leu Gly Ser
500 505 510
Arg Tyr Lys Lys Ala Val Phe Arg Glu Tyr Thr Asp Gly Thr Phe Arg
515 520 525
Ile Pro Arg Pro Arg Thr Gly Pro Glu Glu His Leu Gly Ile Leu Gly
530 535 540
Pro Leu Ile Lys Gly Glu Val Gly Asp Ile Leu Thr Val Val Phe Lys
545 550 555 560
Asn Asn Ala Ser Arg Pro Tyr Ser Val His Ala His Gly Val Leu Glu
565 570 575
Ser Thr Thr Val Trp Pro Leu Ala Ala Glu Pro Gly Glu Val Val Thr
580 585 590
Tyr Gln Trp Asn Ile Pro Glu Arg Ser Gly Pro Gly Pro Asn Asp Ser
595 600 605
Ala Cys Val Ser Trp Ile Tyr Tyr Ser Ala Val Asp Pro Ile Lys Asp
610 615 620
Met Tyr Ser Gly Leu Val Gly Pro Leu Ala Ile Cys Gln Lys Gly Ile
625 630 635 640
Leu Glu Pro His Gly Gly Arg Ser Asp Met Asp Arg Glu Phe Ala Leu
645 650 655
Leu Phe Leu Ile Phe Asp Glu Asn Lys Ser Trp Tyr Leu Glu Glu Asn
660 665 670
Val Ala Thr His Gly Ser Gln Asp Pro Gly Ser Ile Asn Leu Gln Asp
675 680 685
Glu Thr Phe Leu Glu Ser Asn Lys Met His Ala Ile Asn Gly Lys Leu
690 695 700
Tyr Ala Asn Leu Arg Gly Leu Thr Met Tyr Gln Gly Glu Arg Val Ala
705 710 715 720
Trp Tyr Met Leu Ala Met Gly Gln Asp Val Asp Leu His Thr Ile His
725 730 735
Phe His Ala Glu Ser Phe Leu Tyr Arg Asn Gly Glu Asn Tyr Arg Ala
740 745 750
Asp Val Val Asp Leu Phe Pro Gly Thr Phe Glu Val Val Glu Met Val
755 760 765
Ala Ser Asn Pro Gly Thr Trp Leu Met His Cys His Val Thr Asp His
770 775 780

Val His Ala Gly Met Glu Thr Leu Phe Thr Val Phe Ser Arg Thr Glu
 785 790 800
 His Leu Ser Pro Leu Thr Val Ile Thr Lys Glu Thr Glu Lys Ala Val
 805 810 815
 Pro Pro Arg Asp Ile Glu Glu Gly Asn Val Lys Met Leu Gly Met Gln
 820 825 830
 Ile Pro Ile Lys Asn Val Glu Met Leu Ala Ser Val Leu Val Ala Ile
 835 840 845
 Ser Val Thr Leu Leu Leu Val Val Leu Ala Leu Gly Gly Val Val Trp
 850 855 860
 Tyr Gln His Arg Gln Arg Lys Leu Arg Arg Asn Arg Arg Ser Ile Leu
 865 870 875 880
 Asp Asp Ser Phe Lys Leu Leu Ser Phe Lys Gln 890

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 <213> homo sapiens
 <400> 99

Met Leu Gly Ala Trp Ala Val Glu Gly Thr Ala Val Ala Leu Leu Arg
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 Leu Leu Leu Leu Leu Pro Pro Ala Ile Arg Gly Pro Gly Leu Gly
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 Val Ala Gly Val Ala Gly Ala Ala Gly Ala Gly Leu Pro Glu Ser Val
 35 40 45
 Ile Trp Ala Val Asn Ala Gly Gly Glu Ala His Val Asp Val His Gly
 50 55 60
 Ile His Phe Arg Lys Asp Pro Leu Glu Gly Arg Val Gly Arg Ala Ser
 65 70 75 80
 Asp Tyr Gly Met Lys Leu Pro Ile Leu Arg Ser Asn Pro Glu Asp Gln
 85 90 95
 Ile Leu Tyr Gln Thr Glu Arg Tyr Asn Glu Glu Thr Phe Gly Tyr Glu
 100 105 110
 Val Pro Ile Lys Glu Glu Gly Asp Tyr Val Leu Val Leu Lys Phe Ala
 115 120 125
 Glu Val Tyr Phe Ala Gln Ser Gln Gln Lys Val Phe Asp Val Arg Leu
 130 135 140
 Asn Gly His Val Val Val Lys Asp Leu Asp Ile Phe Asp Arg Val Gly
 145 150 155 160
 His Ser Thr Ala His Asp Glu Ile Ile Pro Met Ser Ile Arg Lys Gly
 165 170 175
 Lys Leu Ser Val Gln Gly Glu Val Ser Thr Phe Thr Gly Lys Leu Tyr
 180 185 190
 Ile Glu Phe Val Lys Gly Tyr Tyr Asp Asn Pro Lys Val Cys Ala Leu
 195 200 205
 Tyr Ile Met Ala Gly Thr Val Asp Asp Val Pro Lys Leu Gln Pro His
 210 215 220
 Pro Gly Leu Glu Lys Lys Glu Glu Glu Glu Glu Glu Tyr Asp
 225 230 235 240
 Glu Gly Ser Asn Leu Lys Lys Gln Thr Asn Lys Asn Arg Val Gln Ser
 245 250 255
 Gly Pro Arg Thr Pro Asn Pro Tyr Ala Ser Asp Asn Ser Ser Leu Met
 260 265 270
 Phe Pro Ile Leu Val Ala Phe Gly Val Phe Ile Pro Thr Leu Phe Cys
 275 280 285
 Leu Cys Arg Leu 290

<210> 100
 <211> 963
 <212> PRT
 <213> homo sapiens
 <400> 100

Met Leu His Phe His Leu Leu Lys Phe Lys Thr Arg Val Ile Phe Ser
 1 5 10 15

Ala	Val	Ile	Ile	Met	Val	Thr	Gly	Leu	Cys	Leu	Phe	Leu	Leu	Ser	Leu
Pro	His	Leu	His	Gly	Val	Phe	Glu	Gln	Val	Pro	Ala	Pro	Trp	Trp	Thr
Ser	Leu	Cys	Pro	Trp	Pro	Ile	Met	Glu	Ala	Ala	Ala	Phe	Gln	Ser	Gly
Ser	Leu	Tyr	Pro	Val	Ala	Ser	Phe	Leu	Ala	Ala	Pro	Met	Ser	Glu	Leu
Val	Pro	Asp	Leu	Ser	Phe	Gln	Val	Asp	Leu	His	Thr	Gly	Leu	Ser	Glu
Phe	Ser	Val	Thr	Gln	Arg	Arg	Leu	Ala	His	Gly	Trp	Asn	Glu	Phe	Val
Ala	Asp	Asn	Ser	Glu	Pro	Val	Trp	Lys	Lys	Tyr	Leu	Asp	Gln	Phe	Lys
Asn	Pro	Leu	Ile	Leu	Leu	Leu	Leu	Gly	Ser	Ala	Leu	Val	Ser	Val	Leu
Thr	Lys	Glu	Tyr	Glu	Asp	Ala	Val	Ser	Ile	Ala	Thr	Ala	Val	Leu	Val
Val	Val	Thr	Val	Ala	Phe	Ile	Gln	Glu	Tyr	Arg	Ser	Glu	Lys	Ser	Leu
Glu	Glu	Leu	Thr	Lys	Leu	Val	Pro	Pro	Glu	Cys	Asn	Cys	Leu	Arg	Glu
Gly	Lys	Leu	Gln	His	Leu	Leu	Ala	Arg	Glu	Leu	Val	Pro	Gly	Asp	Val
Val	Ser	Leu	Ser	Ile	Gly	Asp	Arg	Ile	Pro	Ala	Asp	Ile	Arg	Leu	Thr
Glu	Val	Thr	Asp	Leu	Leu	Val	Asp	Glu	Ser	Ser	Phe	Thr	Gly	Glu	Ala
Glu	Pro	Cys	Ser	Lys	Thr	Asp	Ser	Pro	Leu	Thr	Gly	Gly	Gly	Asp	Leu
Thr	Thr	Leu	Ser	Asn	Ile	Val	Phe	Met	Gly	Thr	Leu	Val	Gln	Tyr	Gly
Arg	Gly	Gln	Gly	Val	Val	Ile	Gly	Thr	Gly	Glu	Ser	Ser	Gln	Phe	Gly
Glu	Val	Phe	Lys	Met	Met	Gln	Ala	Glu	Glu	Thr	Pro	Lys	Thr	Pro	Leu
Gln	Lys	Ser	Met	Asp	Arg	Leu	Gly	Lys	Gln	Leu	Thr	Leu	Phe	Ser	Phe
Gly	Ile	Ile	Gly	Leu	Ile	Met	Leu	Ile	Gly	Trp	Ser	Gln	Gly	Lys	Gln
Leu	Leu	Ser	Met	Phe	Thr	Ile	Gly	Val	Ser	Leu	Ala	Val	Ala	Ala	Ile
Pro	Glu	Gly	Leu	Pro	Ile	Val	Val	Met	Val	Thr	Leu	Val	Leu	Gly	Val
Leu	Arg	Met	Ala	Lys	Lys	Arg	Val	Ile	Val	Lys	Lys	Leu	Pro	Ile	Val
Glu	Thr	Leu	Gly	Cys	Cys	Ser	Val	Leu	Cys	Ser	Asp	Lys	Thr	Gly	Thr
Leu	Thr	Ala	Asn	Glu	Met	Thr	Val	Thr	Gln	Leu	Val	Thr	Ser	Asp	Gly
Leu	Arg	Ala	Glu	Val	Ser	Gly	Val	Gly	Tyr	Asp	Gly	Gln	Gly	Thr	Val
Cys	Leu	Leu	Pro	Ser	Lys	Glu	Val	Ile	Lys	Glu	Phe	Ser	Asn	Val	Ser
Val	Gly	Lys	Leu	Val	Glu	Ala	Gly	Cys	Val	Ala	Asn	Asn	Ala	Val	Ile
Arg	Lys	Asn	Ala	Val	Met	Gly	Gln	Pro	Thr	Glu	Gly	Ala	Leu	Met	Ala
Leu	Ala	Met	Lys	Met	Asp	Leu	Ser	Asp	Ile	Lys	Asn	Ser	Tyr	Ile	Arg
Lys	Lys	Glu	Ile	Pro	Phe	Ser	Ser	Glu	Gln	Lys	Trp	Met	Ala	Val	Lys
Cys	Ser	Leu	Lys	Thr	Glu	Asp	Gln	Glu	Asp	Ile	Tyr	Phe	Met	Lys	Gly

Ala Leu Glu Glu Val Ile Arg Tyr Cys Thr Met Tyr Asn Asn Gly Gly
 530 535 540
 Ile Pro Leu Pro Leu Thr Pro Gln Gln Arg Ser Phe Cys Leu Gln Glu
 545 550 555 560
 Glu Lys Arg Met Gly Ser Leu Gly Leu Arg Val Leu Ala Leu Ala Ser
 565 570 575
 Gly Pro Glu Leu Gly Arg Leu Thr Phe Leu Gly Leu Val Gly Ile Ile
 580 585 590
 Asp Pro Pro Arg Val Gly Val Lys Glu Ala Val Gln Val Leu Ser Glu
 595 600 605
 Ser Gly Val Ser Val Lys Met Ile Thr Gly Asp Ala Leu Glu Thr Ala
 610 615 620
 Leu Ala Ile Gly Arg Asn Ile Gly Leu Cys Asn Gly Lys Leu Gln Ala
 625 630 635 640
 Met Ser Gly Glu Glu Val Asp Ser Val Glu Lys Gly Glu Leu Ala Asp
 645 650 655
 Arg Val Gly Lys Val Ser Val Phe Phe Arg Thr Ser Pro Lys His Lys
 660 665 670
 Leu Lys Ile Ile Lys Ala Leu Gln Glu Ser Gly Ala Ile Val Ala Met
 675 680 685
 Thr Gly Asp Gly Val Asn Asp Ala Val Ala Leu Lys Ser Ala Asp Ile
 690 695 700
 Gly Ile Ala Met Gly Gln Thr Gly Thr Asp Val Ser Lys Glu Ala Ala
 705 710 715 720
 Asn Met Ile Leu Val Asp Asp Asp Phe Ser Ala Ile Met Asn Ala Val
 725 730 735
 Glu Glu Gly Lys Gly Ile Phe Tyr Asn Ile Lys Asn Phe Val Arg Phe
 740 745 750
 Gln Leu Ser Thr Ser Ile Ser Ala Leu Ser Leu Ile Thr Leu Ser Thr
 755 760 765
 Val Phe Asn Leu Pro Ser Pro Leu Asn Ala Met Gln Ile Leu Trp Ile
 770 775 780
 Asn Ile Ile Met Asp Gly Pro Pro Ala Gln Ser Leu Gly Val Glu Pro
 785 790 795 800
 Val Asp Lys Asp Ala Phe Arg Gln Pro Pro Arg Ser Val Arg Asp Thr
 805 810 815
 Ile Leu Ser Arg Ala Leu Ile Leu Lys Ile Leu Met Ser Ala Ala Ile
 820 825 830
 Ile Ile Ser Gly Thr Leu Phe Ile Phe Trp Lys Glu Met Pro Glu Asp
 835 840 845
 Arg Ala Ser Thr Pro Arg Thr Thr Met Thr Phe Thr Cys Phe Val
 850 855 860
 Phe Phe Asp Leu Phe Asn Ala Leu Thr Cys Arg Ser Gln Thr Lys Leu
 865 870 875 880
 Ile Phe Glu Ile Gly Phe Leu Arg Asn His Met Phe Leu Tyr Ser Val
 885 890 895
 Leu Gly Ser Ile Leu Gly Gln Leu Ala Val Ile Tyr Ile Pro Pro Leu
 900 905 910
 Gln Arg Val Phe Gln Thr Glu Asn Leu Gly Ala Leu Asp Leu Leu Phe
 915 920 925
 Leu Thr Gly Leu Ala Ser Ser Val Phe Ile Leu Ser Glu Leu Leu Lys
 930 935 940
 Leu Cys Glu Lys Tyr Cys Cys Ser Pro Lys Arg Val Gln Met His Pro
 945 950 955 960
 Glu Asp Val

<210> 101
 <211> 335
 <212> PRT
 <213> homo sapiens
 <400> 101

Met Val Arg Arg Asp Arg Leu Arg Arg Met Arg Glu Trp Trp Val Gln
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 Val Gly Leu Leu Ala Val Pro Leu Leu Ala Ala Tyr Leu His Ile Pro
 Page 110

Pro	Pro	Gln	20	Leu	Ser	Pro	Ala	Leu	25	His	Ser	Trp	Lys	Ser	30	Ser	Gly	Lys
Phe	Phe	35	Thr	Tyr	Lys	Gly	Leu	40	Arg	Ile	Phe	Tyr	Gln	45	Asp	Ser	Val	Gly
Val	Val	Gly	Ser	Pro	Glu	Ile	Val	Val	Leu	Leu	His	Gly	Phe	Pro	Thr			
65					70				75						80			
Ser	Ser	Tyr	Asp	Trp	Tyr	Lys	Ile	Trp	Glu	Gly	Leu	Thr	Leu	Arg	Phe			
			85						90					95				
His	Arg	Val	Ile	Ala	Leu	Asp	Phe	Leu	100	Gly	Phe	Gly	Phe	Ser	Asp	Lys		
			105						110									
Pro	Arg	Pro	His	His	Tyr	Ser	Ile	Phe	Glu	Gln	Ala	Ser	Ile	Val	Glu			
		115							120									
Ala	Leu	Leu	Arg	His	Leu	Gly	Leu	Gln	Asn	Arg	Arg	Ile	Asn	Leu	Leu			
	130					135												
Ser	His	Asp	Tyr	Gly	Asp	Ile	Val	Ala	Gln	Glu	Leu	Leu	Tyr	Arg	Tyr			
145					150					155					160			
Lys	Gln	Asn	Arg	Ser	Gly	Arg	Leu	Thr	Ile	Lys	Ser	Leu	Cys	Leu	Ser			
			165						170						175			
Asn	Gly	Gly	Ile	Phe	Pro	Glu	Thr	His	Arg	Pro	Leu	Leu	Leu	Gln	Lys			
			180						185					190				
Leu	Leu	Lys	Asp	Gly	Gly	Val	Leu	Ser	Pro	Ile	Leu	Thr	Arg	Leu	Met			
		195					200							205				
Asn	Phe	Phe	Val	Phe	Ser	Arg	Gly	Leu	Thr	Pro	Val	Phe	Gly	Pro	Tyr			
	210					215					220							
Thr	Arg	Pro	Ser	Glu	Ser	Glu	Leu	Trp	Asp	Met	Trp	Ala	Gly	Ile	Arg			
225					230					235					240			
Asn	Asn	Asp	Gly	Asn	Leu	Val	Ile	Asp	Ser	Leu	Leu	Gln	Tyr	Ile	Asn			
			245						250					255				
Gln	Arg	Lys	Lys	Phe	Arg	Arg	Arg	Trp	Val	Gly	Ala	Leu	Ala	Ser	Val			
			260					265						270				
Thr	Ile	Pro	Ile	His	Phe	Ile	Tyr	Gly	Pro	Leu	Asp	Pro	Val	Asn	Pro			
		275					280							285				
Tyr	Pro	Glu	Phe	Leu	Glu	Leu	Tyr	Arg	Lys	Thr	Leu	Pro	Arg	Ser	Thr			
	290					295					300							
Val	Ser	Ile	Leu	Asp	Asp	His	Ile	Ser	His	Tyr	Pro	Gln	Leu	Glu	Asp			
305					310					315					320			
Pro	Met	Gly	Phe	Leu	Asn	Ala	Tyr	Met	Gly	Phe	Ile	Asn	Ser	Phe				
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<210> 102
 <211> 992
 <212> PRT
 <213> homo sapiens
 <400> 102

Met	Gly	Ala	Ala	Gly	Arg	Gln	Asp	Phe	Leu	Phe	Lys	Ala	Met	Leu	Thr
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Ile	Ser	Trp	Leu	Thr	Leu	Thr	Cys	Phe	Pro	Gly	Ala	Thr	Ser	Thr	Val
			20					25					30		
Ala	Ala	Gly	Cys	Pro	Asp	Gln	Ser	Pro	Glu	Leu	Gln	Pro	Trp	Asn	Pro
		35					40					45			
Gly	His	Asp	Gln	Asp	His	His	Val	His	Ile	Gly	Gln	Gly	Lys	Thr	Leu
	50					55				60					
Leu	Leu	Thr	Ser	Ser	Ala	Thr	Val	Tyr	Ser	Ile	His	Ile	Ser	Glu	Gly
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Gly	Lys	Leu	Val	Ile	Lys	Asp	His	Asp	Glu	Pro	Ile	Val	Leu	Arg	Thr
			85						90					95	
Arg	His	Ile	Leu	Ile	Asp	Asn	Gly	Gly	Glu	Leu	His	Ala	Gly	Ser	Ala
			100					105					110		
Leu	Cys	Pro	Phe	Gln	Gly	Asn	Phe	Thr	Ile	Ile	Leu	Tyr	Gly	Arg	Ala
		115					120					125			
Asp	Glu	Gly	Ile	Gln	Pro	Asp	Pro	Tyr	Tyr	Gly	Leu	Lys	Tyr	Ile	Gly
	130					135					140				
Val	Gly	Lys	Gly	Gly	Ala	Leu	Glu	Leu	His	Gly	Gln	Lys	Lys	Leu	Ser
145					150				155						160

Trp	Thr	Phe	Leu	Asn	Lys	Thr	Leu	His	Pro	Gly	Gly	Met	Ala	Glu	Gly
				165					170					175	
Gly	Tyr	Phe	Phe	Glu	Arg	Ser	Trp	Gly	His	Arg	Gly	Val	Ile	Val	His
			180					185					190		
Val	Ile	Asp	Pro	Lys	Ser	Gly	Thr	Val	Ile	His	Ser	Asp	Arg	Phe	Asp
		195					200					205			
Thr	Tyr	Arg	Ser	Lys	Lys	Glu	Ser	Glu	Arg	Leu	Val	Gln	Tyr	Leu	Asn
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Ala	Val	Pro	Asp	Gly	Arg	Ile	Leu	Ser	Val	Ala	Val	Asn	Asp	Glu	Gly
	225				230					235				240	
Ser	Arg	Asn	Leu	Asp	Met	Ala	Arg	Lys	Ala	Met	Thr	Lys	Leu	Gly	
				245				250					255		
Ser	Lys	His	Phe	Leu	His	Leu	Gly	Phe	Arg	His	Pro	Trp	Ser	Phe	Leu
			260					265					270		
Thr	Val	Lys	Gly	Asn	Pro	Ser	Ser	Val	Glu	Asp	His	Ile	Glu	Tyr	
		275				280					285				
His	Gly	His	Arg	Gly	Ser	Ala	Ala	Arg	Val	Phe	Lys	Leu	Phe	Gln	
	290					295				300					
Thr	Glu	His	Gly	Glu	Tyr	Phe	Asn	Val	Ser	Leu	Ser	Ser	Glu	Trp	Val
	305				310					315				320	
Gln	Asp	Val	Glu	Trp	Thr	Glu	Trp	Phe	Asp	His	Asp	Lys	Val	Ser	Gln
				325					330					335	
Thr	Lys	Gly	Gly	Glu	Lys	Ile	Ser	Asp	Leu	Trp	Lys	Ala	His	Pro	Gly
			340					345					350		
Lys	Ile	Cys	Asn	Arg	Pro	Ile	Asp	Ile	Gln	Ala	Thr	Thr	Met	Asp	Gly
		355					360					365			
Val	Asn	Leu	Ser	Thr	Glu	Val	Val	Tyr	Lys	Lys	Gly	Gln	Asp	Tyr	Arg
	370					375					380				
Phe	Ala	Cys	Tyr	Asp	Arg	Gly	Arg	Ala	Cys	Arg	Ser	Tyr	Arg	Val	Arg
	385				390					395					400
Phe	Leu	Cys	Gly	Lys	Pro	Val	Arg	Pro	Lys	Leu	Thr	Val	Thr	Ile	Asp
				405					410					415	
Thr	Asn	Val	Asn	Ser	Thr	Ile	Leu	Asn	Leu	Glu	Asp	Asn	Val	Gln	Ser
			420					425					430		
Trp	Lys	Pro	Gly	Asp	Thr	Leu	Val	Ile	Ala	Ser	Thr	Asp	Tyr	Ser	Met
		435					440					445			
Tyr	Gln	Ala	Glu	Glu	Phe	Gln	Val	Leu	Pro	Cys	Arg	Ser	Cys	Ala	Pro
	450					455					460				
Asn	Gln	Val	Lys	Val	Ala	Gly	Lys	Pro	Met	Tyr	Leu	His	Ile	Gly	Glu
	465				470					475				480	
Glu	Ile	Asp	Gly	Val	Asp	Met	Arg	Ala	Glu	Val	Gly	Leu	Leu	Ser	Arg
				485					490					495	
Asn	Ile	Ile	Val	Met	Gly	Glu	Met	Glu	Asp	Lys	Cys	Tyr	Pro	Tyr	Arg
			500					505					510		
Asn	His	Ile	Cys	Asn	Phe	Phe	Asp	Phe	Asp	Thr	Phe	Gly	Gly	His	Ile
		515					520					525			
Lys	Phe	Ala	Leu	Gly	Phe	Lys	Ala	Ala	His	Leu	Glu	Gly	Thr	Glu	Leu
	530					535					540				
Lys	His	Met	Gly	Gln	Gln	Leu	Val	Gly	Gln	Tyr	Pro	Ile	His	Phe	His
	545				550					555				560	
Leu	Ala	Gly	Asp	Val	Asp	Glu	Arg	Gly	Gly	Tyr	Asp	Pro	Pro	Thr	Tyr
				565					570					575	
Ile	Arg	Asp	Leu	Ser	Ile	His	His	Thr	Phe	Ser	Arg	Cys	Val	Thr	Val
			580					585					590		
His	Gly	Ser	Asn	Gly	Leu	Leu	Ile	Lys	Asp	Val	Val	Gly	Tyr	Asn	Ser
		595					600					605			
Leu	Gly	His	Cys	Phe	Phe	Thr	Glu	Asp	Gly	Pro	Glu	Glu	Arg	Asn	Thr
	610					615					620				
Phe	Asp	His	Cys	Leu	Gly	Leu	Leu	Val	Lys	Ser	Gly	Thr	Leu	Leu	Pro
	625				630					635				640	
Ser	Asp	Arg	Asp	Ser	Lys	Met	Cys	Lys	Met	Ile	Thr	Glu	Asp	Ser	Tyr
				645					650					655	
Pro	Gly	Tyr	Ile	Pro	Lys	Pro	Arg	Gln	Asp	Cys	Asn	Ala	Val	Ser	Thr
			660					665					670		

Phe Trp Met Ala Asn Pro Asn Asn Asn Leu Ile Asn Cys Ala Ala Ala
 Gly Ser 675 Glu Glu Thr Gly Phe 680 Trp Phe Ile Phe His 685 His Val Pro Thr
 Gly 690 Pro Ser Val Gly Met Tyr Ser Pro Gly Tyr 700 Ser Glu His Ile Pro
 705 Leu Gly Lys Phe Tyr 710 Asn Asn Arg Ala His 715 Ser Asn Tyr Arg Ala Gly
 Met Ile Ile Asp 725 Gly Val Lys Thr Thr Glu Ala Ser Ala Lys Asp
 Lys Arg Pro Phe Leu Ser Ile Ile 745 Ser Ala Arg Tyr Ser 750 Pro His Gln
 Asp Ala Asp Pro Leu Lys Pro Arg Glu Pro Ala Ile Ile Arg His Phe
 770 Ile Ala Tyr Lys Asn Gln Asp His Gly Ala Trp Leu Arg Gly Gly Asp
 785 Val Trp Leu Asp Ser Cys Arg Phe Ala Asp 810 Asn Gly Ile Gly Leu Thr
 Leu Ala Ser Gly 820 Gly Thr Phe Pro Tyr 825 Asp Asp Gly Ser Lys Gln Glu
 Ile Lys Asn Ser Leu Phe Val Gly Glu Ser Gly Asn Val Gly Thr Glu
 Met Met Asp Asn Arg Ile Trp Gly Pro Gly Gly Leu Asp His Ser Gly
 850 Arg Thr Leu Pro Ile Gly 855 Gln Asn Phe Pro Ile Arg Gly Ile Gln Leu
 865 Tyr Asp Gly Pro Ile Asn Ile Gln Asn Cys Thr Phe Arg Lys Phe Val
 Ala Leu Glu Gly Arg His Thr Ser Ala Leu Ala Phe Arg Leu Asn Asn
 Ala Trp Gln Ser Cys Pro His Asn Asn Val Thr Gly Ile Ala Phe Glu
 Asp Val Pro Ile Thr Ser Arg Val Phe Phe Gly Glu Pro Gly Pro Trp
 930 Phe Asn Gln Leu Asp Met Asp Gly Asp Lys Thr Ser Val Phe His Asp
 945 Val Asp Gly Ser Val Ser Glu Tyr Pro Gly Ser Tyr Leu Thr Lys Asn
 Asp Asn Trp His Ser Leu Ala Ser Lys 970 Ala Ala Ser Gly Pro Ser Gly
 980

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 <213> homo sapiens
 <400> 103

Met Glu His Leu Lys Ala Phe Asp Asp Glu Ile Asn Ala Phe Leu Asp
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 Asn Met Phe Gly Pro Arg Asp Ser Arg Val Arg Gly Trp Phe Thr Leu
 20 25 30
 Asp Ser Tyr Leu Pro Thr Phe Phe Leu Thr Val Met Tyr Leu Leu Ser
 35 40 45
 Ile Trp Leu Gly Asn Lys Tyr Met Lys Asn Arg Pro Ala Leu Ser Leu
 50 55 60
 Arg Gly Ile Leu Thr Leu Tyr Asn Leu Gly Ile Thr Leu Leu Ser Ala
 65 70 75 80
 Tyr Met Leu Ala Glu Leu Ile Leu Ser Thr Trp Glu Gly Gly Tyr Asn
 85 90 95
 Leu Gln Cys Gln Asp Leu Thr Ser Ala Gly Glu Ala Asp Ile Arg Val
 100 105 110
 Ala Lys Val Leu Trp Trp Tyr Tyr Phe Ser Lys Ser Val Glu Phe Leu
 115 120 125
 Asp Thr Ile Phe Phe Val Leu Arg Lys Lys Thr Ser Gln Ile Thr Phe
 130 135 140
 Leu His Val Tyr His His Ala Ser Met Phe Asn Ile Trp Trp Cys Val

145	Leu	Asn	Trp	Ile	Pro	150	Cys	Gly	Gln	Ser	Phe	155	Phe	Gly	Pro	Thr	Leu	160	Asn
	Ser	Phe	Val	His	165	Ile	Leu	Met	Tyr	Ser	170	Tyr	Tyr	Gly	Leu	Ser	175	Val	Phe
	Pro	Ser	Met	His	180	Lys	Tyr	Leu	Trp	Trp	185	Lys	Lys	Tyr	Leu	Thr	Gln	Ala	
	Gln	Leu	Val	Gln	195	Phe	Val	Leu	Thr	Ile	200	Thr	His	Thr	Met	Ser	Ala	Val	
	Val	Lys	Pro	Cys	210	Gly	Phe	Pro	Phe	Gly	215	Cys	Leu	Ile	Phe	Gln	Ser	Ser	
	Tyr	Met	Leu	Thr	225	Leu	Val	Ile	Leu	Phe	230	Leu	Asn	Phe	Tyr	Val	Gln	Thr	
	Tyr	Arg	Lys	Lys	245	Pro	Met	Lys	Lys	Asp	250	Met	Gln	Glu	Pro	Pro	Ala	Gly	
	Lys	Glu	Val	Lys	260	Asn	Gly	Phe	Ser	Lys	265	Ala	Tyr	Phe	Thr	Ala	Ala	Asn	
	Gly	Val	Met	Asn	275	Lys	Lys	Ala	Gln		280								
					290						295								

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Met	Ile	Ala	Glu	Pro	Ala	His	Phe	Tyr	Leu	Phe	Gly	Leu	Ile	Cys	Leu
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Cys	Ser	Gly	Ser	Arg	Leu	Arg	Gln	Glu	Asp	Phe	Pro	Pro	Arg	Ile	Val
				20				25					30		
Glu	His	Pro	Ser	Asp	Leu	Ile	Val	Ser	Lys	Gly	Glu	Pro	Ala	Thr	Leu
		35					40					45			
Asn	Cys	Lys	Ala	Glu	Gly	Arg	Pro	Thr	Pro	Thr	Ile	Glu	Trp	Tyr	Lys
	50					55					60				
Gly	Gly	Glu	Arg	Val	Glu	Thr	Asp	Lys	Asp	Asp	Pro	Arg	Ser	His	Arg
65					70				75					80	
Met	Leu	Leu	Pro	Ser	Gly	Ser	Leu	Phe	Phe	Leu	Arg	Ile	Val	His	Gly
				85					90					95	
Arg	Lys	Ser	Arg	Pro	Asp	Glu	Gly	Val	Tyr	Val	Cys	Val	Ala	Arg	Asn
			100					105					110		
Tyr	Leu	Gly	Glu	Ala	Val	Ser	His	Asn	Ala	Ser	Leu	Glu	Val	Ala	Ile
		115					120					125			
Leu	Arg	Asp	Asp	Phe	Arg	Gln	Asn	Pro	Ser	Asp	Val	Met	Val	Ala	Val
	130					135					140				
Gly	Glu	Pro	Ala	Val	Met	Glu	Cys	Gln	Pro	Pro	Arg	Gly	His	Pro	Glu
145					150				155					160	
Pro	Thr	Ile	Ser	Trp	Lys	Lys	Asp	Gly	Ser	Pro	Leu	Asp	Asp	Lys	Asp
				165					170					175	
Glu	Arg	Ile	Thr	Ile	Arg	Gly	Gly	Lys	Leu	Met	Ile	Thr	Tyr	Thr	Arg
		180						185					190		
Lys	Ser	Asp	Ala	Gly	Lys	Tyr	Val	Cys	Val	Gly	Thr	Asn	Met	Val	Gly
		195					200					205			
Glu	Arg	Glu	Ser	Glu	Val	Ala	Glu	Leu	Thr	Val	Leu	Glu	Arg	Pro	Ser
	210					215					220				
Phe	Val	Lys	Arg	Pro	Ser	Asn	Leu	Ala	Val	Thr	Val	Asp	Asp	Ser	Ala
225					230				235					240	
Glu	Phe	Lys	Cys	Glu	Ala	Arg	Gly	Asp	Pro	Val	Pro	Thr	Val	Arg	Trp
				245					250					255	
Arg	Lys	Asp	Asp	Gly	Glu	Leu	Pro	Lys	Ser	Arg	Tyr	Glu	Ile	Arg	Asp
		260						265					270		
Asp	His	Thr	Leu	Lys	Ile	Arg	Lys	Val	Thr	Ala	Gly	Asp	Met	Gly	Ser
		275					280					285			
Tyr	Thr	Cys	Val	Ala	Glu	Asn	Met	Val	Gly	Lys	Ala	Glu	Ala	Ser	Ala
	290					295					300				
Thr	Leu	Thr	Val	Gln	Glu	Pro	Pro	His	Phe	Val	Val	Lys	Pro	Arg	Asp
305					310				315						320

Gln	Val	Val	Ala	Leu	Gly	Arg	Thr	Val	Thr	Phe	Gln	Cys	Glu	Ala	Thr
				325					330					335	
Gly	Asn	Pro	Gln	Pro	Ala	Ile	Phe	Trp	Arg	Arg	Glu	Gly	Ser	Gln	Asn
			340					345					350		
Leu	Leu	Phe	Ser	Tyr	Gln	Pro	Pro	Gln	Ser	Ser	Ser	Arg	Phe	Ser	Val
		355					360					365			
Ser	Gln	Thr	Gly	Asp	Leu	Thr	Ile	Thr	Asn	Val	Gln	Arg	Ser	Asp	Val
	370					375					380				
Gly	Tyr	Tyr	Ile	Cys	Gln	Thr	Leu	Asn	Val	Ala	Gly	Ser	Ile	Ile	Thr
385					390					395					400
Lys	Ala	Tyr	Leu	Glu	Val	Thr	Asp	Val	Ile	Ala	Asp	Arg	Pro	Pro	Pro
				405					410					415	
Val	Ile	Arg	Gln	Gly	Pro	Val	Asn	Gln	Thr	Val	Ala	Val	Asp	Gly	Thr
			420					425					430		
Phe	Val	Leu	Ser	Cys	Val	Ala	Thr	Gly	Ser	Pro	Val	Pro	Thr	Ile	Leu
		435					440					445			
Trp	Arg	Lys	Asp	Gly	Val	Leu	Val	Ser	Thr	Gln	Asp	Ser	Arg	Ile	Lys
	450					455					460				
Gln	Leu	Glu	Asn	Gly	Val	Leu	Gln	Ile	Arg	Tyr	Ala	Lys	Leu	Gly	Asp
465					470					475					480
Thr	Gly	Arg	Tyr	Thr	Cys	Ile	Ala	Ser	Thr	Pro	Ser	Gly	Glu	Ala	Thr
				485					490					495	
Trp	Ser	Ala	Tyr	Ile	Glu	Val	Gln	Glu	Phe	Gly	Val	Pro	Val	Gln	Pro
			500					505					510		
Pro	Arg	Pro	Thr	Asp	Pro	Asn	Leu	Ile	Pro	Ser	Ala	Pro	Ser	Lys	Pro
		515					520					525			
Glu	Val	Thr	Asp	Val	Ser	Arg	Asn	Thr	Val	Thr	Leu	Ser	Trp	Gln	Pro
	530						535				540				
Asn	Leu	Asn	Ser	Gly	Ala	Thr	Pro	Thr	Ser	Tyr	Ile	Ile	Glu	Ala	Phe
545					550					555					560
Ser	His	Ala	Ser	Gly	Ser	Ser	Trp	Gln	Thr	Val	Ala	Glu	Asn	Val	Lys
				565					570					575	
Thr	Glu	Thr	Ser	Ala	Ile	Lys	Gly	Leu	Lys	Pro	Asn	Ala	Ile	Tyr	Leu
			580					585					590		
Phe	Leu	Val	Arg	Ala	Ala	Asn	Ala	Tyr	Gly	Ile	Ser	Asp	Pro	Ser	Gln
		595					600					605			
Ile	Ser	Asp	Pro	Val	Lys	Thr	Gln	Asp	Val	Leu	Pro	Thr	Ser	Gln	Gly
	610					615					620				
Val	Asp	His	Lys	Gln	Val	Gln	Arg	Glu	Leu	Gly	Asn	Ala	Val	Leu	His
625					630					635					640
Leu	His	Asn	Pro	Thr	Val	Leu	Ser	Ser	Ser	Ser	Ile	Glu	Val	His	Trp
				645					650					655	
Thr	Val	Asp	Gln	Gln	Ser	Gln	Tyr	Ile	Gln	Gly	Tyr	Lys	Ile	Leu	Tyr
			660					665					670		
Arg	Pro	Ser	Gly	Ala	Asn	His	Gly	Glu	Ser	Asp	Trp	Leu	Val	Phe	Glu
		675					680					685			
Val	Arg	Thr	Pro	Ala	Lys	Asn	Ser	Val	Val	Ile	Pro	Asp	Leu	Arg	Lys
	690					695					700				
Gly	Val	Asn	Tyr	Glu	Ile	Lys	Ala	Arg	Pro	Phe	Phe	Asn	Glu	Phe	Gln
705					710					715					720
Gly	Ala	Asp	Ser	Glu	Ile	Lys	Phe	Ala	Lys	Thr	Leu	Glu	Glu	Ala	Pro
				725					730					735	
Ser	Ala	Pro	Pro	Gln	Gly	Val	Thr	Val	Ser	Lys	Asn	Asp	Gly	Asn	Gly
			740					745					750		
Thr	Ala	Ile	Leu	Val	Ser	Trp	Gln	Pro	Pro	Pro	Glu	Asp	Thr	Gln	Asn
		755					760					765			
Gly	Met	Val	Gln	Glu	Tyr	Lys	Val	Trp	Cys	Leu	Gly	Asn	Glu	Thr	Arg
	770					775					780				
Tyr	His	Ile	Asn	Lys	Thr	Val	Asp	Gly	Ser	Thr	Phe	Ser	Val	Val	Ile
785					790					795					800
Pro	Phe	Leu	Val	Pro	Gly	Ile	Arg	Tyr	Ser	Val	Glu	Val	Ala	Ala	Ser
				805					810					815	
Thr	Gly	Ala	Gly	Ser	Gly	Val	Lys	Ser	Glu	Pro	Gln	Phe	Ile	Gln	Leu
			820					825					830		

Asp Ala His Gly Asn Pro Val Ser Pro Glu Asp Gln Val Ser Leu Ala
 835 840 845
 Gln Gln Ile Ser Asp Val Val Lys Gln Pro Ala Phe Ile Ala Gly Ile
 850 855 860
 Gly Ala Ala Cys Trp Ile Ile Leu Met Val Phe Ser Ile Trp Leu Tyr
 865 870 875 880
 Arg His Arg Lys Lys Arg Asn Gly Leu Thr Ser Thr Tyr Ala Gly Ile
 885 890 895
 Arg Lys Val Pro Ser Phe Thr Phe Thr Pro Thr Val Thr Tyr Gln Arg
 900 905 910
 Gly Gly Glu Ala Val Ser Ser Gly Gly Arg Pro Gly Leu Leu Asn Ile
 915 920 925
 Ser Glu Pro Ala Ala Gln Pro Trp Leu Ala Asp Thr Trp Pro Asn Thr
 930 935 940
 Gly Asn Asn His Asn Asp Cys Ser Ile Ser Cys Cys Thr Ala Gly Asn
 945 950 955 960
 Gly Asn Ser Asp Ser Asn Leu Thr Thr Tyr Ser Arg Pro Ala Asp Cys
 965 970 975
 Ile Ala Asn Tyr Asn Asn Gln Leu Asp Asn Lys Gln Thr Asn Leu Met
 980 985 990
 Leu Pro Glu Ser Thr Val Tyr Gly Asp Val Asp Leu Ser Asn Lys Ile
 995 1000 1005
 Asn Glu Met Lys Thr Phe Asn Ser Pro Asn Leu Lys Asp Gly Arg
 1010 1015 1020
 Phe Val Asn Pro Ser Gly Gln Pro Thr Pro Tyr Ala Thr Thr Gln
 1025 1030 1035
 Leu Ile Gln Ser Asn Leu Ser Asn Asn Met Asn Asn Gly Ser Gly
 1040 1045 1050
 Asp Ser Gly Glu Lys His Trp Lys Pro Leu Gly Gln Gln Lys Gln
 1055 1060 1065
 Glu Val Ala Pro Val Gln Tyr Asn Ile Val Glu Gln Asn Lys Leu
 1070 1075 1080
 Asn Lys Asp Tyr Arg Ala Asn Asp Thr Val Pro Pro Thr Ile Pro
 1085 1090 1095
 Tyr Asn Gln Ser Tyr Asp Gln Asn Thr Gly Gly Ser Tyr Asn Ser
 1100 1105 1110
 Ser Asp Arg Gly Ser Ser Thr Ser Gly Ser Gln Gly His Lys Lys
 1115 1120 1125
 Gly Ala Arg Thr Pro Lys Val Pro Lys Gln Gly Gly Met Asn Trp
 1130 1135 1140
 Ala Asp Leu Leu Pro Pro Pro Pro Ala His Pro Pro Pro His Ser
 1145 1150 1155
 Asn Ser Glu Glu Tyr Asn Ile Ser Val Asp Glu Ser Tyr Asp Gln
 1160 1165 1170
 Glu Met Pro Cys Pro Val Pro Pro Ala Arg Met Tyr Leu Gln Gln
 1175 1180 1185
 Asp Glu Leu Glu Glu Glu Glu Asp Glu Arg Gly Pro Thr Pro Pro
 1190 1195 1200
 Val Arg Gly Ala Ala Ser Ser Pro Ala Ala Val Ser Tyr Ser His
 1205 1210 1215
 Gln Ser Thr Ala Thr Leu Thr Pro Ser Pro Gln Glu Glu Leu Gln
 1220 1225 1230
 Pro Met Leu Gln Asp Cys Pro Glu Glu Thr Gly His Met Gln His
 1235 1240 1245
 Gln Pro Asp Arg Arg Arg Gln Pro Val Ser Pro Pro Pro Pro Pro
 1250 1255 1260
 Arg Pro Ile Ser Pro Pro His Thr Tyr Gly Tyr Ile Ser Gly Pro
 1265 1270 1275
 Leu Val Ser Asp Met Asp Thr Asp Ala Pro Glu Glu Glu Glu Asp
 1280 1285 1290
 Glu Ala Asp Met Glu Val Ala Lys Met Gln Thr Arg Arg Leu Leu
 1295 1300 1305
 Leu Arg Gly Leu Glu Gln Thr Pro Ala Ser Ser Val Gly Asp Leu
 1310 1315 1320

Glu	Ser	Ser	Val	Thr	Gly	Ser	Met	Ile	Asn	Gly	Trp	Gly	Ser	Ala
1325						1330					1335			
Ser	Glu	Glu	Asp	Asn	Ile	Ser	Ser	Gly	Arg	Ser	Ser	Val	Ser	Ser
1340						1345					1350			
Ser	Asp	Gly	Ser	Phe	Phe	Thr	Asp	Ala	Asp	Phe	Ala	Gln	Ala	Val
1355						1360					1365			
Ala	Ala	Ala	Ala	Glu	Tyr	Ala	Gly	Leu	Lys	Val	Ala	Arg	Arg	Gln
1370						1375					1380			
Met	Gln	Asp	Ala	Ala	Gly	Arg	Arg	His	Phe	His	Ala	Ser	Gln	Cys
1385						1390					1395			
Pro	Arg	Pro	Thr	Ser	Pro	Val	Ser	Thr	Asp	Ser	Asn	Met	Ser	Ala
1400						1405					1410			
Ala	Val	Met	Gln	Lys	Thr	Arg	Pro	Ala	Lys	Lys	Leu	Lys	His	Gln
1415						1420					1425			
Pro	Gly	His	Leu	Arg	Arg	Glu	Thr	Tyr	Thr	Asp	Asp	Leu	Pro	Pro
1430						1435					1440			
Pro	Pro	Val	Pro	Pro	Pro	Ala	Ile	Lys	Ser	Pro	Thr	Ala	Gln	Ser
1445						1450					1455			
Lys	Thr	Gln	Leu	Glu	Val	Arg	Pro	Val	Val	Val	Pro	Lys	Leu	Pro
1460						1465					1470			
Ser	Met	Asp	Ala	Arg	Thr	Asp	Arg	Ser	Ser	Asp	Arg	Lys	Gly	Ser
1475						1480					1485			
Ser	Tyr	Lys	Gly	Arg	Glu	Val	Leu	Asp	Gly	Arg	Gln	Val	Val	Asp
1490						1495					1500			
Met	Arg	Thr	Asn	Pro	Gly	Asp	Pro	Arg	Glu	Ala	Gln	Glu	Gln	Gln
1505						1510					1515			
Asn	Asp	Gly	Lys	Gly	Arg	Gly	Asn	Lys	Ala	Ala	Lys	Arg	Asp	Leu
1520						1525					1530			
Pro	Pro	Ala	Lys	Thr	His	Leu	Ile	Gln	Glu	Asp	Ile	Leu	Pro	Tyr
1535						1540					1545			
Cys	Arg	Pro	Thr	Phe	Pro	Thr	Ser	Asn	Asn	Pro	Arg	Asp	Pro	Ser
1550						1555					1560			
Ser	Ser	Ser	Ser	Met	Ser	Ser	Arg	Gly	Ser	Gly	Ser	Arg	Gln	Arg
1565						1570					1575			
Glu	Gln	Ala	Asn	Val	Gly	Arg	Arg	Asn	Ile	Ala	Glu	Met	Gln	Val
1580						1585					1590			
Leu	Gly	Gly	Tyr	Glu	Arg	Gly	Glu	Asp	Asn	Asn	Glu	Glu	Leu	Glu
1595						1600					1605			
Glu	Thr	Glu	Ser											
1610														

<210> 105
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 <400> 105

Met	Ala	Gly	Gly	Ala	Arg	Glu	Val	Leu	Thr	Leu	Gln	Leu	Gly	His	Phe
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Ala	Gly	Phe	Val	Gly	Ala	His	Trp	Trp	Asn	Gln	Gln	Asp	Ala	Ala	Leu
			20					25				30			
Gly	Arg	Ala	Thr	Asp	Ser	Lys	Glu	Pro	Pro	Gly	Glu	Leu	Cys	Pro	Asp
		35				40					45				
Val	Leu	Tyr	Arg	Thr	Gly	Arg	Thr	Leu	His	Gly	Gln	Glu	Thr	Tyr	Thr
	50					55				60					
Pro	Arg	Leu	Ile	Leu	Met	Asp	Leu	Lys	Gly	Ser	Leu	Ser	Ser	Leu	Lys
65					70				75					80	
Glu	Glu	Gly	Gly	Leu	Tyr	Arg	Asp	Lys	Gln	Leu	Asp	Ala	Ala	Ile	Ala
				85				90						95	
Trp	Gln	Gly	Lys	Leu	Thr	Thr	His	Lys	Glu	Glu	Leu	Tyr	Pro	Lys	Asn
		100					105						110		
Pro	Tyr	Leu	Gln	Asp	Phe	Leu	Ser	Ala	Glu	Gly	Val	Leu	Ser	Ser	Asp
		115				120						125			
Gly	Val	Trp	Arg	Val	Lys	Ser	Ile	Pro	Asn	Gly	Lys	Gly	Ser	Ser	Pro
	130					135					140				
Leu	Pro	Thr	Ala	Thr	Thr	Pro	Lys	Pro	Leu	Ile	Pro	Thr	Glu	Ala	Ser

145	Ile	Arg	Val	Trp	Ser	150	Asp	Phe	Leu	Arg	Val	155	His	Leu	His	Pro	Arg	160	Ser
					165						170						175		
	Ile	Cys	Met	Ile	Gln	Lys	Tyr	Asn	His	185	Asp	Gly	Glu	Ala	Gly	Arg	190	Leu	
				180															
	Glu	Ala	Phe	Gly	Gln	Gly	Glu	Ser	Val	200	Leu	Lys	Glu	Pro	Lys	Tyr	Gln		
			195											205					
	Glu	Glu	Leu	Glu	Asp	Arg	Leu	His	Phe	Tyr	Val	Glu	Glu	Cys	Asp	Tyr			
			210										220						
	Leu	Gln	Gly	Phe	Gln	Ile	230	Leu	Cys	Asp	Leu	His	235	Asp	Gly	Phe	Ser	Gly	
																			240
	Val	Gly	Ala	Lys	Ala	Ala	Glu	Leu	Leu	Gln	250	Asp	Glu	Tyr	Ser	Gly	Arg		
					245														255
	Gly	Ile	Ile	Thr	Trp	Gly	Leu	Leu	Pro	Gly	Pro	Tyr	His	Arg	Gly	Glu			
				260															
	Ala	Gln	Arg	Asn	Ile	Tyr	Arg	Leu	280	Leu	Asn	Thr	Ala	Phe	Gly	Leu	Val		
				275															
	His	Leu	Thr	Ala	His	Ser	Ser	Leu	Val	Cys	Pro	Leu	Ser	Leu	Gly	Gly			
				290															
	Ser	Leu	Gly	Leu	Arg	Pro	Glu	Pro	Pro	Val	Ser	Phe	Pro	Tyr	Leu	His			
						310													320
	Tyr	Asp	Ala	Thr	Leu	Pro	Phe	His	Cys	Ser	330	Ala	Ile	Leu	Ala	Thr	Ala		
					325														335
	Leu	Asp	Thr	Val	Thr	Val	Pro	Tyr	Arg	Leu	Cys	Ser	Ser	Pro	Val	Ser			
				340															
	Met	Val	His	Leu	Ala	Asp	Met	Leu	Ser	Phe	Cys	Gly	Lys	Lys	Val	Val			
				355															
	Thr	Ala	Gly	Ala	Ile	Ile	Pro	Phe	Pro	Leu	Ala	Pro	Gly	Gln	Ser	Leu			
				370															
	Pro	Asp	Ser	Leu	Val	Gln	Phe	Gly	Gly	Ala	Thr	Pro	Trp	Thr	Pro	Leu			
						390													400
	Ser	Ala	Cys	Gly	Glu	Pro	Ser	Gly	Thr	Arg	Cys	Phe	Ala	Gln	Ser	Val			
					405														
	Val	Leu	Arg	Gly	Ile	Asp	Arg	Ala	Cys	His	Thr	Ser	Gln	Leu	Thr	Pro			
				420															
	Gly	Thr	Pro	Pro	Pro	Ser	Ala	Leu	His	Ala	Cys	Thr	Thr	Gly	Glu	Glu			
				435															
	Ile	Leu	Ala	Gln	Tyr	Leu	Gln	Gln	Gln	Gln	Pro	Gly	Val	Met	Ser	Ser			
	Ser	His	Leu	Leu	Leu	Thr	Pro	Cys	Arg	Val	Ala	Pro	Pro	Tyr	Pro	His			
						470													480
	Leu	Phe	Ser	Ser	Cys	Ser	Pro	Pro	Gly	Met	Val	Leu	Asp	Gly	Ser	Pro			
					485														495
	Lys	Gly	Ala	Ala	Val	Glu	Ser	Ile	Pro	Val	Phe	Gly	Ala	Leu	Cys	Ser			
					500														
	Ser	Ser	Ser	Leu	His	Gln	Thr	Leu	Glu	Ala	Leu	Ala	Arg	Asp	Leu	Thr			
					515														
	Lys	Leu	Asp	Leu	Arg	Arg	Trp	Ala	Ser	Phe	Met	Asp	Ala	Gly	Val	Glu			
					530														
	His	Asp	Asp	Val	Ala	Glu	Leu	Leu	Gln	Glu	Leu	Gln	Ser	Leu	Ala	Gln			
						550													560
	Cys	Tyr	Gln	Gly	Gly	Asp	Ser	Leu	Val	Asp	570								
					565														

<210> 106
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 <212> PRT
 <213> homo sapiens
 <400> 106

Met	Ala	Gln	Tyr	Leu	Ser	Thr	Leu	Leu	Leu	Leu	Ala	Thr	Leu	Ala
1				5					10				15	
Val	Ala	Leu	Ala	Trp	Ser	Pro	Lys	Glu	Glu	Asp	Arg	Ile	Ile	Pro
			20					25				30		Gly
Gly	Ile	Tyr	Asn	Ala	Asp	Leu	Asn	Asp	Glu	Trp	Val	Gln	Arg	Ala
		35					40					45		Leu

His Phe Ala Ile Ser Glu Tyr Asn Lys Ala Thr Lys Asp Asp Tyr Tyr
 50 55 60
 Arg Arg Pro Leu Arg Val Leu Arg Ala Arg Gln Thr Val Gly Gly
 65 70 75 80
 Val Asn Tyr Phe Phe Asp Val Glu Val Gly Arg Thr Ile Cys Thr Lys
 85 90 95
 Ser Gln Pro Asn Leu Asp Thr Cys Ala Phe His Glu Gln Pro Glu Leu
 100 105 110
 Gln Lys Lys Gln Leu Cys Ser Phe Glu Ile Tyr Glu Val Pro Trp Glu
 115 120 125
 Asn Arg Arg Ser Leu Val Lys Ser Arg Cys Gln Glu Ser
 130 135 140

<210> 107
 <211> 247
 <212> PRT
 <213> homo sapiens
 <400> 107

Met Pro Arg Leu Leu His Pro Ala Leu Pro Leu Leu Leu Gly Ala Thr
 1 5 10 15
 Leu Thr Phe Arg Ala Leu Arg Arg Ala Leu Cys Arg Leu Pro Leu Pro
 20 25 30
 Val His Val Arg Ala Asp Pro Leu Arg Thr Trp Arg Trp His Asn Leu
 35 40 45
 Leu Val Ser Phe Ala His Ser Ile Val Ser Gly Ile Trp Ala Leu Leu
 50 55 60
 Cys Val Trp Gln Thr Pro Asp Met Leu Val Glu Ile Glu Thr Ala Trp
 65 70 75 80
 Ser Leu Ser Gly Tyr Leu Leu Val Cys Phe Ser Ala Gly Tyr Phe Ile
 85 90 95
 His Asp Thr Val Asp Ile Val Ala Ser Gly Gln Thr Arg Ala Ser Trp
 100 105 110
 Glu Tyr Leu Val His His Val Met Ala Met Gly Ala Phe Phe Ser Gly
 115 120 125
 Ile Phe Trp Ser Ser Phe Val Gly Gly Val Leu Thr Leu Leu Val
 130 135 140
 Glu Val Ser Asn Ile Phe Leu Thr Ile Arg Met Met Met Lys Ile Ser
 145 150 155 160
 Asn Ala Gln Asp His Leu Leu Tyr Arg Val Asn Lys Tyr Val Asn Leu
 165 170 175
 Val Met Tyr Phe Leu Phe Arg Leu Ala Pro Gln Ala Tyr Leu Thr His
 180 185 190
 Phe Phe Leu Arg Tyr Val Asn Gln Arg Thr Leu Gly Thr Phe Leu Leu
 195 200 205
 Gly Ile Leu Leu Met Leu Asp Val Met Ile Ile Ile Tyr Phe Ser Arg
 210 215 220
 Leu Leu Arg Ser Asp Phe Cys Pro Glu His Val Pro Lys Lys Gln His
 225 230 235 240
 Lys Asp Lys Phe Leu Thr Glu
 245

<210> 108
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 <212> PRT
 <213> homo sapiens
 <400> 108

Met Ala Ala Arg Ser Val Ser Gly Ile Thr Arg Arg Val Phe Met Trp
 1 5 10 15
 Thr Val Ser Gly Thr Pro Cys Arg Glu Phe Trp Ser Arg Phe Arg Lys
 20 25 30
 Glu Lys Glu Pro Val Val Val Glu Thr Val Glu Glu Lys Lys Glu Pro
 35 40 45
 Ile Leu Val Cys Pro Pro Leu Arg Ser Arg Ala Tyr Thr Pro Pro Glu
 50 55 60
 Asp Leu Gln Ser Arg Leu Glu Ser Tyr Val Lys Glu Val Phe Gly Ser
 65 70 75 80

Ser Leu Pro Ser Asn Trp Gln Asp Ile Ser Leu Glu Asp Ser Arg Leu
 Lys Phe Asn 85 Leu Ala His Leu Ala 90 Asp Asp Leu Gly His 95 Val Val
 Pro Asn Ser 100 Arg Leu His Gln Met 105 Cys Arg Val Arg Asp Val Leu Asp
 Phe Tyr 115 Asn Val Pro Ile Gln Asp Arg Ser Lys Phe 125 Asp Glu Leu Ser
 Ala Ser 130 Asn Leu Pro Pro 135 Asn Leu Lys Ile Thr 140 Trp Ser Tyr
 145 155
 <210> 109
 <211> 601
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 Met Arg Val Val Arg Leu Leu Arg Leu Arg Ala Ala Leu Thr Leu Leu
 1 Gly Glu Val Pro Arg Arg Pro Ala Ser Arg Gly Val Pro Gly Ser Arg
 20 25
 Arg Thr Gln Lys Gly Ser Gly Ala Arg Trp Glu Lys Glu Lys His Glu
 35 40
 Asp Gly Val Lys Trp Arg Gln Leu Glu His Lys Gly 45 Pro Tyr Phe Ala
 50 55
 Pro Pro Tyr Glu Pro Leu Pro Asp Gly Val Arg Phe Phe Tyr Glu Gly
 65 70 75 80
 Arg Pro Val Arg Leu Ser Val Ala Ala Glu Glu Val Ala Thr Phe Tyr
 85 90 95
 Gly Arg Met Leu Asp His Glu Tyr Thr Lys Glu Val Phe Arg Lys
 100 105 110
 Asn Phe Phe Asn Asp Trp Arg Lys Glu Met Ala Val Glu Glu Arg Glu
 115 120 125
 Val Ile Lys Ser Leu Asp Lys Cys Asp Phe Thr Glu Ile His Arg Tyr
 130 135 140
 Phe Val Asp Lys Ala Ala Arg Lys Val Leu Ser Arg Glu Glu Lys
 145 150 155 160
 Gln Lys Leu Lys Glu Glu Ala Glu Lys Leu Gln Gln Glu Phe Gly Tyr
 165 170 175
 Cys Ile Leu Asp Gly His Gln Glu Lys Ile Gly Asn Phe Lys Ile Glu
 180 185 190
 Pro Pro Gly Leu Phe Arg Gly Arg Asp His Pro Lys Met Gly Met
 195 200 205
 Leu Lys Arg Arg Ile Thr Pro Glu Asp Val Val Ile Asn Cys Ser Arg
 210 215 220
 Asp Ser Lys Ile Pro Glu Pro Pro Ala Gly His Gln Trp Lys Glu Val
 225 230 235 240
 Arg Ser Asp Asn Thr Val Thr Trp Leu Ala Ala Trp Thr Glu Ser Val
 245 250 255
 Gln Asn Ser Ile Lys Tyr Ile Met Leu Asn Pro Cys Ser Lys Leu Lys
 260 265 270
 Gly Glu Thr Ala Trp Gln Lys Phe Glu Thr Ala Arg Arg Leu Arg Gly
 275 280 285
 Phe Val Asp Glu Ile Arg Ser Gln Tyr Arg Ala Asp Trp Lys Ser Arg
 290 295 300
 Glu Met Lys Thr Arg Gln Arg Ala Val Ala Leu Tyr Phe Ile Asp Lys
 305 310 315 320
 Leu Ala Leu Arg Ala Gly Asn Glu Lys Glu Asp Gly Glu Ala Ala Asp
 325 330 335
 Thr Val Gly Cys Cys Ser Leu Arg Val Glu His Val Gln Leu His Pro
 340 345 350
 Glu Ala Asp Gly Cys Gln His Val Val Glu Phe Asp Phe Leu Gly Lys
 355 360 365
 Asp Cys Ile Arg Tyr Tyr Asn Arg Val Pro Val Glu Lys Pro Val Tyr
 370 375 380
 Lys Asn Leu Gln Leu Phe Met Glu Asn Lys Asp Pro Arg Asp Asp Leu

385	Phe	Asp	Arg	Leu	Thr	390	Thr	Thr	Ser	Leu	Asn	395	Lys	His	Leu	Gln	Glu	400	Leu
	Met	Asp	Gly	Leu	405	Ala	Lys	Val	Phe	410	Arg	Thr	Tyr	Asn	Ala	415	Ser	Ile	
	Thr	Leu	Gln	Glu	420	Gln	Leu	Arg	Ala	425	Leu	Thr	Arg	Ala	Glu	430	Asp	Ser	Ile
	Ala	Ala	Lys	Ile	435	Leu	Ser	Tyr	Asn	440	Arg	Ala	Asn	Arg	Val	445	Val	Ala	Ile
	Leu	Cys	Asn	His	450	Gln	Arg	Ala	Thr	455	Pro	Ser	Thr	Phe	Glu	460	Lys	Ser	Met
	465	Gln	Asn	Leu	470	Gln	Thr	Lys	Ile	475	Gln	Ala	Lys	Lys	Glu	480	Gln	Val	Ala
	Ala	Arg	Ala	Glu	485	Leu	Arg	Arg	Ala	490	Arg	Ala	Glu	His	Lys	495	Ala	Gln	Gly
	Asp	Gly	Lys	Ser	500	Arg	Ser	Val	Leu	505	Glu	Lys	Lys	Arg	Arg	510	Leu	Leu	Glu
	Lys	Leu	Gln	Glu	515	Gln	Leu	Ala	Gln	520	Leu	Ser	Val	Gln	Ala	525	Thr	Asp	Lys
	Glu	Glu	Asn	Lys	530	Gln	Val	Ala	Leu	535	Gly	Thr	Ser	Lys	Leu	540	Asn	Tyr	Leu
	545	Asp	Pro	Arg	550	Ile	Ala	Trp	Cys	555	Lys	Arg	Phe	Arg	Val	560	Pro	Val	
	Glu	Lys	Ile	Tyr	565	Ser	Lys	Thr	Gln	570	Arg	Glu	Arg	Phe	Ala	575	Trp	Ala	Leu
	Ala	Met	Ala	Gly	580	Glu	Asp	Phe	Glu	585	Phe					590			
					595				600										
<210>	110																		
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<212>	PRT																		
<213>	homo sapiens																		
<400>	110																		
Met	Asn	Gln	Glu	Asp	Leu	Asp	Pro	Asp	Ser	Thr	Thr	Asp	Val	Gly	Asp				
1	Val	Thr	Asn	Thr	Glu	Glu	Glu	Leu	Ile	Arg	Glu	Cys	Glu	Glu	Met	Trp			
			20						25					30					
Lys	Asp	Met	Glu	Glu	Cys	Gln	Asn	Lys	Leu	Ser	Leu	Ile	Gly	Thr	Glu				
		35					40					45							
Thr	Leu	Thr	Asp	Ser	Asn	Ala	Gln	Leu	Ser	Leu	Leu	Ile	Met	Gln	Val				
		50				55					60								
Lys	Cys	Leu	Thr	Ala	Glu	Leu	Ser	Gln	Trp	Gln	Lys	Lys	Thr	Pro	Glu				
65					70				75					80					
Thr	Ile	Pro	Leu	Thr	Glu	Asp	Val	Leu	Ile	Thr	Leu	Gly	Lys	Glu	Glu				
			85						90					95					
Phe	Gln	Lys	Leu	Arg	Gln	Asp	Leu	Glu	Met	Val	Leu	Ser	Thr	Lys	Glu				
			100					105						110					
Ser	Lys	Asn	Glu	Lys	Leu	Lys	Glu	Asp	Leu	Glu	Arg	Glu	Gln	Arg	Trp				
		115					120					125							
Leu	Asp	Glu	Gln	Gln	Gln	Ile	Met	Glu	Ser	Leu	Asn	Val	Leu	His	Ser				
		130				135					140								
Glu	Leu	Lys	Asn	Lys	Val	Glu	Thr	Phe	Ser	Glu	Ser	Arg	Ile	Phe	Asn				
145					150					155					160				
Glu	Leu	Lys	Thr	Lys	Met	Leu	Asn	Ile	Lys	Glu	Tyr	Lys	Glu	Lys	Leu				
			165						170					175					
Leu	Ser	Thr	Leu	Gly	Glu	Phe	Leu	Glu	Asp	His	Phe	Pro	Leu	Pro	Asp				
			180					185					190						
Arg	Ser	Val	Lys	Lys	Lys	Lys	Lys	Asn	Ile	Gln	Glu	Ser	Ser	Val	Asn				
		195					200					205							
Leu	Ile	Thr	Leu	His	Glu	Met	Leu	Glu	Ile	Leu	Ile	Asn	Arg	Leu	Phe				
		210				215				220									
Asp	Val	Pro	His	Asp	Pro	Tyr	Val	Lys	Ile	Ser	Asp	Ser	Phe	Trp	Pro				
225					230					235					240				
Pro	Tyr	Val	Glu	Leu	Leu	Arg	Asn	Gly	Ile	Ala	Leu	Arg	His	Pro					
				245				250					255						

Glu Asp Pro Thr Arg Ile Arg Leu Glu Ala Phe His Gln
 260 265

<210> 111
 <211> 829
 <212> PRT
 <213> homo sapiens
 <400> 111

Met	Gly	Leu	Pro	Arg	Gly	Pro	Leu	Ala	Ser	Leu	Leu	Leu	Leu	Gln	Val
1				5					10					15	
Cys	Trp	Leu	Gln	Cys	Ala	Ala	Ser	Glu	Pro	Cys	Arg	Ala	Val	Phe	Arg
			20					25					30		
Glu	Ala	Glu	Val	Thr	Leu	Glu	Ala	Gly	Gly	Ala	Glu	Gln	Glu	Pro	Gly
		35					40					45			
Gln	Ala	Leu	Gly	Lys	Val	Phe	Met	Gly	Cys	Pro	Gly	Gln	Glu	Pro	Ala
	50					55					60				
Leu	Phe	Ser	Thr	Asp	Asn	Asp	Phe	Thr	Val	Arg	Asn	Gly	Glu	Thr	
65					70				75					80	
Val	Gln	Glu	Arg	Arg	Ser	Leu	Lys	Glu	Arg	Asn	Pro	Leu	Lys	Ile	Phe
			85						90					95	
Pro	Ser	Lys	Arg	Ile	Leu	Arg	Arg	His	Lys	Arg	Asp	Trp	Val	Val	Ala
			100					105					110		
Pro	Ile	Ser	Val	Pro	Glu	Asn	Gly	Lys	Gly	Pro	Phe	Pro	Gln	Arg	Leu
		115					120					125			
Asn	Gln	Leu	Lys	Ser	Asn	Lys	Asp	Arg	Asp	Thr	Lys	Ile	Phe	Tyr	Ser
	130					135					140				
Ile	Thr	Gly	Pro	Gly	Ala	Asp	Ser	Pro	Pro	Glu	Gly	Val	Phe	Ala	Val
145					150					155					160
Glu	Lys	Glu	Thr	Gly	Trp	Leu	Leu	Leu	Asn	Lys	Pro	Leu	Asp	Arg	Glu
				165					170					175	
Glu	Ile	Ala	Lys	Tyr	Glu	Leu	Phe	Gly	His	Ala	Val	Ser	Glu	Asn	Gly
			180					185					190		
Ala	Ser	Val	Glu	Asp	Pro	Met	Asn	Ile	Ser	Ile	Ile	Val	Thr	Asp	Gln
		195					200					205			
Asn	Asp	His	Lys	Pro	Lys	Phe	Thr	Gln	Asp	Thr	Phe	Arg	Gly	Ser	Val
	210					215					220				
Leu	Glu	Gly	Val	Leu	Pro	Gly	Thr	Ser	Val	Met	Gln	Val	Thr	Ala	Thr
225					230					235					240
Asp	Glu	Asp	Asp	Ala	Ile	Tyr	Thr	Tyr	Asn	Gly	Val	Val	Ala	Tyr	Ser
				245					250					255	
Ile	His	Ser	Gln	Glu	Pro	Lys	Asp	Pro	His	Asp	Leu	Met	Phe	Thr	Ile
			260					265					270		
His	Arg	Ser	Thr	Gly	Thr	Ile	Ser	Val	Ile	Ser	Ser	Gly	Leu	Asp	Arg
		275					280					285			
Glu	Lys	Val	Pro	Glu	Tyr	Thr	Leu	Thr	Ile	Gln	Ala	Thr	Asp	Met	Asp
	290					295					300				
Gly	Asp	Gly	Ser	Thr	Thr	Ala	Val	Ala	Val	Val	Glu	Ile	Leu	Asp	
305					310				315					320	
Ala	Asn	Asp	Asn	Ala	Pro	Met	Phe	Asp	Pro	Gln	Lys	Tyr	Glu	Ala	His
			325					330						335	
Val	Pro	Glu	Asn	Ala	Val	Gly	His	Glu	Val	Gln	Arg	Leu	Thr	Val	Thr
			340					345					350		
Asp	Leu	Asp	Ala	Pro	Asn	Ser	Pro	Ala	Trp	Arg	Ala	Thr	Tyr	Leu	Ile
		355					360					365			
Met	Gly	Gly	Asp	Asp	Gly	Asp	His	Phe	Thr	Ile	Thr	Thr	His	Pro	Glu
	370					375					380				
Ser	Asn	Gln	Gly	Ile	Leu	Thr	Thr	Arg	Lys	Gly	Leu	Asp	Phe	Glu	Ala
385					390					395					400
Lys	Asn	Gln	His	Thr	Leu	Tyr	Val	Glu	Val	Thr	Asn	Glu	Ala	Pro	Phe
			405						410					415	
Val	Leu	Lys	Leu	Pro	Thr	Ser	Thr	Ala	Thr	Ile	Val	Val	His	Val	Glu
			420					425					430		
Asp	Val	Asn	Glu	Ala	Pro	Val	Phe	Val	Pro	Pro	Ser	Lys	Val	Val	Glu
		435					440					445			
Val	Gln	Glu	Gly	Ile	Pro	Thr	Gly	Glu	Pro	Val	Cys	Val	Tyr	Thr	Ala

450	Glu Asp Pro Asp Lys	455	Glu Asn Gln Lys Ile	460	Ser Tyr Arg Ile Leu Arg
465	Asp Pro Ala Gly Trp	470	Leu Ala Met Asp	475	Pro Asp Ser Gly Gln Val Thr
	485		490		495
Ala Val Gly Thr	Leu Asp Arg Glu	505	Asp Glu Gln Phe Val	510	Arg Asn Asn
500					
Ile Tyr Glu Val	Met Val Leu	520	Ala Met Asp Asn Gly	525	Ser Pro Pro Thr
515					
Thr Gly Thr Gly	Thr Leu Leu	535	Leu Thr Leu Ile	540	Asp Val Asn Asp His
530					
Gly Pro Val Pro	Glu Pro Arg Gln	550	Ile Thr Ile Thr	555	Cys Asn Gln Ser Pro
545					560
Val Arg Gln Val	Leu Asn Ile Thr	570	Asp Lys Asp	575	Leu Ser Pro His Thr
565					
Ser Pro Phe Gln	Ala Gln Leu Thr	585	Asp Ser Asp Ile	590	Tyr Trp Thr
580					
Ala Glu Val Asn	Glu Glu Gly Asp	600	Thr Val Val Leu	605	Ser Leu Lys Lys
595					
Phe Leu Lys Gln	Asp Thr Tyr	615	Asp Val His Leu	620	Ser Leu Ser Asp His
610					
Gly Asn Lys Glu	Gln Leu Thr	630	Val Ile Arg Ala	635	Thr Val Cys Asp Cys
625					640
His Gly His Val	Glu Thr Cys Pro	650	Gly Pro Trp Lys	655	Gly Gly Phe Ile
645					
Leu Pro Val Leu	Gly Ala Val Leu	665	Ala Leu Leu Phe	670	Leu Leu Val
660					
Leu Leu Leu Val	Arg Lys Lys	680	Arg Lys Ile Lys	685	Glu Pro Leu Leu
675					
Leu Pro Glu Asp	Asp Thr Arg	695	Asp Asn Val Phe	700	Tyr Tyr Gly Glu Glu
690					
Gly Gly Gly Glu	Glu Asp Gln	710	Asp Tyr Asp Ile	715	Thr Gln Leu His Arg
705					720
Gly Leu Glu Ala	Arg Pro Glu	725	Val Val Leu	730	Arg Asn Asp Val Ala
720					735
Thr Ile Ile Pro	Thr Pro Met Tyr	745	Arg Pro Arg Pro	750	Ala Asn Pro Asp
740					
Glu Ile Gly Asn	Phe Ile Ile Glu	760	Asn Leu Lys Ala	765	Ala Asn Thr Asp
755					
Pro Thr Ala Pro	Pro Tyr Asp	775	Thr Leu Leu Val	780	Phe Asp Tyr Glu Gly
770					
Ser Gly Ser Asp	Ala Ala Ser	790	Leu Ser Ser Leu	795	Thr Ser Ser Ala Ser
785					800
Asp Gln Asp Gln	Asp Tyr Asp Tyr	810	Leu Asn Glu	815	Trp Gly Ser Arg Phe
805					
Lys Lys Leu Ala	Asp Met Tyr Gly	825	Gly Glu Asp Asp		
820					

<210> 112
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 <212> PRT
 <213> homo sapiens
 <400> 112

Met Asp Met Phe	Pro Leu Thr Trp	Val Phe Leu Ala	Leu Tyr Phe Ser
1	5	10	15
Arg His Gln Val	Arg Gly Gln Pro	Asp Pro Pro Cys	Gly Gly Arg Leu
20		25	30
Asn Ser Lys Asp	Ala Gly Tyr Ile	Thr Ser Pro Gly	Tyr Pro Gln Asp
35		40	45
Tyr Pro Ser His	Gln Asn Cys Glu	Trp Ile Val Tyr	Ala Pro Glu Pro
50		55	60
Asn Gln Lys Ile	Val Leu Asn Phe	Asn Pro His Phe	Glu Ile Glu Lys
65		70	75
His Asp Cys Lys	Tyr Asp Phe Ile	Glu Ile Arg Asp	Gly Asp Ser Glu
85		90	95

Ser	Ala	Asp	Leu	Leu	Gly	Lys	His	Cys	Gly	Asn	Ile	Ala	Pro	Pro	Thr
Ile	Ile	Ser	100	Gly	Ser	Met	Leu	105	Tyr	Ile	Lys	Phe	Thr	Ser	Asp
Ala	Arg	Gln	Gly	Ala	Gly	Phe	Ser	120	Leu	Arg	Tyr	Glu	125	Phe	Lys
Gly	Ser	Glu	Asp	Cys	Ser	135	Lys	Asn	Phe	Thr	Ser	140	Pro	Asn	Gly
145	Ser	Pro	Gly	Phe	Pro	150	Glu	Lys	Tyr	Pro	His	155	Asn	Leu	Asp
Glu	Thr	Ile	Leu	165	Ala	Lys	Pro	Lys	Met	Glu	Ile	170	Ile	Leu	Gln
Phe	Thr	Ile	Leu	180	Glu	His	Asp	Pro	185	Leu	Gln	Val	Gly	Glu	Gly
Ile	Phe	Asp	Leu	195	Trp	Leu	Asp	200	Trp	Asp	Gly	Ile	Pro	His	Val
Lys	Tyr	Asp	Trp	Leu	Asp	215	Gly	Thr	Lys	Thr	Pro	220	Ser	Glu	Leu
Leu	Ile	Gly	Lys	Tyr	Cys	230	Gly	Thr	Lys	Thr	Pro	235	Ser	Glu	Leu
225	Thr	Gly	Ile	Leu	Ser	245	Leu	Thr	Phe	His	Thr	250	Asp	Met	Ala
Ser	Thr	Gly	Ile	Leu	Ser	245	Leu	Thr	Phe	His	Thr	250	Asp	Met	Ala
Lys	Asp	Gly	Phe	Ser	Ala	Arg	Tyr	Tyr	265	Leu	Val	His	Gln	Glu	Pro
Glu	Asn	Phe	Gln	Cys	Asn	Val	Pro	280	Leu	Gly	Met	Glu	Ser	Gly	Arg
Ala	Asn	Glu	Gln	Ile	Ser	Ala	Ser	295	Ser	Thr	Tyr	Ser	300	Asp	Gly
Thr	Pro	Gln	Gln	Ser	Arg	Leu	His	Gly	Asp	Asp	315	Asn	Gly	Trp	Thr
305	Leu	Asp	Ser	Asn	325	Lys	Glu	Tyr	Leu	Gln	330	Val	Asp	Leu	Arg
Asn	Leu	Asp	Ser	Asn	325	Lys	Glu	Tyr	Leu	Gln	330	Val	Asp	Leu	Arg
Thr	Met	Leu	Thr	Ala	Ile	Ala	Thr	Gln	Gly	Ala	Ile	Ser	Arg	Glu	Thr
Gln	Asn	Gly	Tyr	Tyr	Val	Lys	Ser	360	Tyr	Lys	Leu	Glu	Val	Ser	Thr
Gly	Glu	Asp	Trp	Met	Val	Tyr	Arg	His	Gly	Lys	Asn	380	His	Lys	Val
370	Gln	Ala	Asn	Asn	Asp	Ala	Thr	Glu	Val	Val	Leu	395	Asn	Lys	Leu
385	Leu	Leu	Thr	Arg	Phe	Val	Arg	Ile	Arg	Pro	Gln	Thr	Trp	His	Ala
Pro	Leu	Leu	Thr	Arg	405	Leu	Glu	Leu	Phe	Gly	Cys	Arg	Val	Thr	Asp
Gly	Ile	Ala	Leu	Arg	420	Leu	Glu	Leu	Phe	425	Gly	Cys	Arg	Val	Thr
Pro	Cys	Ser	Asn	Met	Leu	Gly	Met	Leu	Ser	Gly	Leu	Ile	Ala	Asp	Ser
Gln	Ile	Ser	Ala	Ser	Ser	Thr	Gln	Glu	Tyr	Leu	Trp	445	Ser	Pro	Ser
450	Ala	Arg	Leu	Val	Ser	Ser	Arg	Ser	Gly	Trp	Phe	Pro	Arg	Ile	Pro
465	Gln	Pro	Gly	Glu	Glu	Trp	Leu	Gln	Val	Asp	Leu	Gly	Thr	Pro	Lys
Ala	Gln	Pro	Gly	Glu	485	Ile	Ile	Gln	Gly	490	Ala	Arg	Gly	Gly	Asp
Thr	Val	Lys	Gly	Val	Ile	Ile	Gln	Gly	505	Ala	Arg	Gly	Gly	510	Ser
Thr	Ala	Val	Glu	Ala	Arg	Ala	Phe	Val	Arg	Lys	Phe	Lys	525	Val	Ser
Ser	Leu	Asn	Gly	Lys	Asp	Trp	Glu	Tyr	Ile	Gln	Asp	Pro	Arg	Thr	Gln
530	Gln	Pro	Lys	Leu	Phe	Glu	Gly	Asn	Met	His	Tyr	540	Thr	Pro	Asp
545	Arg	Arg	Phe	Asp	Pro	Ile	Pro	Ala	Gln	Tyr	Val	Arg	Val	Tyr	Pro
Arg	Trp	Ser	Pro	Ala	Gly	Ile	Gly	Met	585	Arg	Leu	Glu	Val	Leu	Gly
Asp	Trp	Thr	595	Ser	Lys	Pro	Thr	600	Val	Lys	Thr	Leu	Gly	605	Pro

Lys Ser Glu Glu Thr Thr Thr Pro Tyr Pro Thr Glu Glu Glu Ala Thr
 610 615 620
 Glu Cys Gly Glu Asn Cys Ser Phe Glu Asp Asp Lys Asp Leu Gln Leu
 625 630 635 640
 Pro Ser Gly Phe Asn Cys Asn Phe Asp Phe Leu Glu Glu Pro Cys Gly
 645 650 655
 Trp Met Tyr Asp His Ala Lys Trp Leu Arg Thr Thr Trp Ala Ser Ser
 660 665 670
 Ser Ser Pro Asn Asp Arg Thr Phe Pro Asp Asp Arg Asn Phe Leu Arg
 675 680 685
 Leu Gln Ser Asp Ser Gln Arg Glu Gly Gln Tyr Ala Arg Leu Ile Ser
 690 695 700
 Pro Pro Val His Leu Pro Arg Ser Pro Val Cys Met Glu Phe Gln Tyr
 705 710 715 720
 Gln Ala Thr Gly Gly Arg Gly Val Ala Leu Gln Val Val Arg Glu Ala
 725 730 735
 Ser Gln Glu Ser Lys Leu Leu Trp Val Ile Arg Glu Asp Gln Gly Gly
 740 745 750
 Glu Trp Lys His Gly Arg Ile Ile Leu Pro Ser Tyr Asp Met Glu Tyr
 755 760 765
 Gln Ile Val Phe Glu Gly Val Ile Gly Lys Gly Arg Ser Gly Glu Ile
 770 775 780
 Ala Ile Asp Asp Ile Arg Ile Ser Thr Asp Val Pro Leu Glu Asn Cys
 785 790 795 800
 Met Glu Pro Ile Ser Ala Phe Ala Val Asp Ile Pro Glu Ile His Glu
 805 810 815
 Arg Glu Gly Tyr Glu Asp Glu Ile Asp Asp Glu Tyr Glu Val Asp Trp
 820 825 830
 Ser Asn Ser Ser Ser Ala Thr Ser Gly Ser Gly Ala Pro Ser Thr Asp
 835 840 845
 Lys Glu Lys Ser Trp Leu Tyr Thr Leu Asp Pro Ile Leu Ile Thr Ile
 850 855 860
 Ile Ala Met Ser Ser Leu Gly Val Leu Leu Gly Ala Thr Cys Ala Gly
 865 870 875 880
 Leu Leu Leu Tyr Cys Thr Cys Ser Tyr Ser Gly Leu Ser Ser Arg Ser
 885 890 895
 Cys Thr Thr Leu Glu Asn Tyr Asn Phe Glu Leu Tyr Asp Gly Leu Lys
 900 905 910
 His Lys Val Lys Met Asn His Gln Lys Cys Cys Ser Glu Ala
 915 920 925

<210> 113
 <211> 220
 <212> PRT
 <213> homo sapiens
 <400> 113

Met Ser Met Gly Leu Glu Ile Thr Gly Thr Ala Leu Ala Val Leu Gly
 1 5 10 15
 Trp Leu Gly Thr Ile Val Cys Cys Ala Leu Pro Met Trp Arg Val Ser
 20 25 30
 Ala Phe Ile Gly Ser Asn Ile Ile Thr Ser Gln Asn Ile Trp Glu Gly
 35 40 45
 Leu Trp Met Asn Cys Val Val Gln Ser Thr Gly Gln Met Gln Cys Lys
 50 55 60
 Val Tyr Asp Ser Leu Leu Ala Leu Pro Gln Asp Leu Gln Ala Ala Arg
 65 70 75 80
 Ala Leu Ile Val Val Ala Ile Leu Leu Ala Phe Gly Leu Leu Val
 85 90 95
 Ala Leu Val Gly Ala Gln Cys Thr Asn Cys Val Gln Asp Asp Thr Ala
 100 105 110
 Lys Ala Lys Ile Thr Ile Val Ala Gly Val Leu Phe Leu Leu Ala Ala
 115 120 125
 Leu Leu Thr Leu Val Pro Val Ser Trp Ser Ala Asn Thr Ile Ile Arg
 130 135 140
 Asp Phe Tyr Asn Pro Val Val Pro Glu Ala Gln Lys Arg Glu Met Gly

145	Ala	Gly	Leu	Tyr	Val	150	Gly	Trp	Ala	Ala	Ala	155	Ala	Leu	Gln	Leu	Leu	160	Gly
	Gly	Ala	Leu	Leu	165	Cys	Cys	Ser	Cys	Pro	170	Pro	Arg	Glu	Lys	Lys	175	Tyr	Thr
	Ala	Thr	Lys	Val	180	Val	Tyr	Ser	Ala	Pro	185	Arg	Ser	Thr	Gly	Pro	Gly	Ala	
	Ser	Leu	Gly	Thr	195	Gly	Tyr	Asp	Arg	Lys	200	Asp	Tyr	Val	205				
		210						215						220					

<210> 114
 <211> 209
 <212> PRT
 <213> homo sapiens
 <400> 114

Met	Ala	Ser	Met	Gly	Leu	Gln	Val	Met	Gly	Ile	Ala	Leu	Ala	Val	Leu	
1				5					10					15		
Gly	Trp	Leu	Ala	Val	Met	Leu	Cys	Cys	Ala	Leu	Pro	Met	Trp	Arg	Val	
			20					25					30			
Thr	Ala	Phe	Ile	Gly	Ser	Asn	Ile	Val	Thr	Ser	Gln	Thr	Ile	Trp	Glu	
		35				40						45				
Gly	Leu	Trp	Met	Asn	Cys	Val	Gln	Ser	Thr	Gly	Gln	Met	Gln	Cys		
		50				55				60						
Lys	Val	Tyr	Asp	Ser	Leu	Leu	Ala	Leu	Pro	Gln	Asp	Leu	Gln	Ala	Ala	
65					70				75					80		
Arg	Ala	Leu	Val	Ile	Ile	Ser	Ile	Ile	Val	Ala	Ala	Leu	Gly	Val	Leu	
			85						90					95		
Leu	Ser	Val	Val	Gly	Gly	Lys	Cys	Thr	Asn	Cys	Leu	Glu	Asp	Glu	Ser	
			100					105					110			
Ala	Lys	Ala	Lys	Thr	Met	Ile	Val	Ala	Gly	Val	Val	Phe	Leu	Leu	Ala	
		115				120						125				
Gly	Leu	Met	Val	Ile	Val	Pro	Val	Ser	Trp	Thr	Ala	His	Asn	Ile	Ile	
		130				135					140					
Gln	Asp	Phe	Tyr	Asn	Pro	Leu	Val	Ala	Ser	Gly	Gln	Lys	Arg	Glu	Met	
145				150					155					160		
Gly	Ala	Ser	Leu	Tyr	Val	Gly	Trp	Ala	Ala	Ser	Gly	Leu	Leu	Leu	Leu	
				165				170					175			
Gly	Gly	Gly	Leu	Leu	Cys	Cys	Asn	Cys	Pro	Pro	Arg	Thr	Asp	Lys	Pro	
			180					185					190			
Tyr	Ser	Ala	Lys	Tyr	Ser	Ala	Ala	Arg	Ser	Ala	Ala	Ala	205	Ser	Asn	Tyr
		195				200										

<210> 115
 <211> 346
 <212> PRT
 <213> homo sapiens
 <400> 115

Met	Phe	Leu	Ser	Ile	Leu	Val	Ala	Leu	Cys	Leu	Trp	Leu	His	Leu	Ala
1				5					10					15	
Leu	Gly	Val	Arg	Gly	Ala	Pro	Cys	Glu	Ala	Val	Arg	Ile	Pro	Met	Cys
			20					25					30		
Arg	His	Met	Pro	Trp	Asn	Ile	Thr	Arg	Met	Pro	Asn	His	Leu	His	His
		35				40						45			
Ser	Thr	Gln	Glu	Asn	Ala	Ile	Leu	Ala	Ile	Glu	Gln	Tyr	Glu	Glu	Leu
		50				55					60				
Val	Asp	Val	Asn	Cys	Ser	Ala	Val	Leu	Arg	Phe	Phe	Phe	Cys	Ala	Met
65					70				75					80	
Tyr	Ala	Pro	Ile	Cys	Thr	Leu	Glu	Phe	Leu	His	Asp	Pro	Ile	Lys	Pro
			85					90					95		
Cys	Lys	Ser	Val	Cys	Gln	Arg	Ala	Arg	Asp	Asp	Cys	Glu	Pro	Leu	Met
			100					105					110		
Lys	Met	Tyr	Asn	His	Ser	Trp	Pro	Glu	Ser	Leu	Ala	Cys	Asp	Glu	Leu
		115				120						125			
Pro	Val	Tyr	Asp	Arg	Gly	Val	Cys	Ile	Ser	Pro	Glu	Ala	Ile	Val	Thr

130	Asp	Leu	Pro	Glu	Asp	Val	135	Lys	Trp	Ile	Asp	Ile	140	Thr	Pro	Asp	Met	Met
145	Val	Gln	Glu	Arg	Pro	150	Leu	Asp	Val	Asp	Cys	155	Arg	Leu	Ser	Pro	Asp	160
	Arg	Cys	Lys	Cys	Lys	165	Val	Lys	Pro	Thr	Leu	170	Ala	Thr	Tyr	Leu	Ser	175
	Lys	Asn	Tyr	Ser	Tyr	180	Val	Ile	His	Ala	Lys	185	Ile	Lys	Ala	Val	Gln	Arg
	Ser	Gly	Cys	Asn	Glu	195	Val	Thr	Thr	Val	Val	200	Asp	Val	Lys	Glu	Ile	Phe
	Lys	Ser	Ser	Ser	Pro	210	Ile	Pro	Arg	Thr	Gln	215	Val	Pro	Leu	Ile	Thr	Asn
225	Ser	Ser	Cys	Gln	Cys	230	Pro	His	Ile	Leu	Pro	235	His	Gln	Asp	Val	Leu	Ile
	Met	Cys	Tyr	Glu	Trp	245	Arg	Ser	Arg	Met	Met	250	Leu	Leu	Glu	Asn	Cys	Leu
	Val	Glu	Lys	Trp	Arg	260	Asp	Gln	Leu	Ser	Lys	265	Arg	Ser	Ile	Gln	Trp	Glu
	Glu	Arg	Leu	Gln	Glu	275	Gln	Arg	Arg	Thr	Val	280	Gln	Asp	Lys	Lys	Lys	Thr
	Ala	Gly	Arg	Thr	Ser	290	Arg	Asn	Pro	Pro	Lys	295	Pro	Lys	Gly	Lys	Pro	300
305	Pro	Ala	Pro	Lys	Pro	310	Ala	Ser	Pro	Lys	Lys	315	Asn	Ile	Lys	Thr	Arg	Ser
	Ala	Gln	Lys	Arg	Thr	325	Asn	Pro	Lys	Arg	Val	330						335
						340						345						

<210> 116

<211> 553

<212> PRT

<213> homo sapiens

<400> 116

Met	Ala	Ala	Pro	Ala	Gly	Gly	Gly	Gly	Ser	Ala	Val	Ser	Val	Leu	Ala
1				5					10					15	
Pro	Asn	Gly	Arg	Arg	His	Thr	Val	Lys	Val	Thr	Pro	Ser	Thr	Val	Leu
			20					25					30		
Leu	Gln	Val	Leu	Glu	Asp	Thr	Cys	Arg	Arg	Gln	Asp	Phe	Asn	Pro	Cys
		35					40				45				
Glu	Tyr	Asp	Leu	Lys	Phe	Gln	Arg	Ser	Val	Leu	Asp	Leu	Ser	Leu	Gln
	50					55					60				
Trp	Arg	Phe	Ala	Asn	Leu	Pro	Asn	Asn	Ala	Lys	Leu	Glu	Met	Val	Pro
65				70					75						80
Ala	Ser	Arg	Ser	Arg	Glu	Gly	Pro	Glu	Asn	Met	Val	Arg	Ile	Ala	Leu
			85						90					95	
Gln	Leu	Asp	Asp	Gly	Ser	Arg	Leu	Gln	Asp	Ser	Phe	Cys	Ser	Gly	Gln
		100						105					110		
Thr	Leu	Trp	Glu	Leu	Leu	Ser	His	Phe	Pro	Gln	Ile	Arg	Glu	Cys	Leu
	115						120					125			
Gln	His	Pro	Gly	Gly	Ala	Thr	Pro	Val	Cys	Val	Tyr	Thr	Arg	Asp	Glu
	130					135					140				
Val	Thr	Gly	Glu	Ala	Ala	Leu	Arg	Gly	Thr	Thr	Leu	Gln	Ser	Leu	Gly
145				150					155						160
Leu	Thr	Gly	Gly	Ser	Ala	Thr	Ile	Arg	Phe	Val	Met	Lys	Cys	Tyr	Asp
				165					170					175	
Pro	Val	Gly	Lys	Thr	Pro	Gly	Ser	Leu	Gly	Ser	Ser	Ala	Ser	Ala	Gly
			180					185					190		
Gln	Ala	Ala	Ala	Ser	Ala	Pro	Leu	Pro	Leu	Glu	Ser	Gly	Glu	Leu	Ser
	195						200					205			
Arg	Gly	Asp	Leu	Ser	Arg	Pro	Glu	Asp	Ala	Asp	Thr	Ser	Gly	Pro	Cys
	210					215					220				
Cys	Glu	His	Thr	Gln	Glu	Lys	Gln	Ser	Thr	Arg	Ala	Pro	Ala	Ala	Ala
225				230						235					240
Pro	Phe	Val	Pro	Phe	Ser	Gly	Gly	Gly	Gln	Arg	Leu	Gly	Gly	Pro	Pro
				245					250					255	

Gly Pro Thr Arg Pro Leu Thr Ser Ser Ser Ala Lys Leu Pro Lys Ser
 Leu Ser Ser 260 Gly Gly Pro Ser 265 Lys Pro Lys Lys Ser 270 Lys Ser Gly
 Gln Asp Pro Gln Gln Glu Gln Glu Arg Glu Arg Asp Pro Gln
 290 295 300
 Gln Glu Gln Glu Arg Glu Arg Pro Val Asp Arg Glu Pro Val Asp Arg
 305 310 315 320
 Glu Pro Val Val Cys His Pro Asp Leu Glu Arg Leu Gln Ala Trp
 325 335
 Pro Ala Glu Leu Pro Asp Glu Phe Phe Glu Leu Thr Val Asp Asp Val
 340 345 350
 Arg Arg Arg Leu Ala Gln Leu Lys Ser Glu Arg Lys Arg Leu Glu Glu
 355 360 365
 Ala Pro Leu Val Thr Lys Ala Phe Arg Glu Ala Gln Ile Lys Glu Lys
 370 375 380
 Leu Glu Arg Tyr Pro Lys Val Ala Leu Arg Val Leu Phe Pro Asp Arg
 385 390 395 400
 Tyr Val Leu Gln Gly Phe Phe Arg Pro Ser Glu Thr Val Gly Asp Leu
 405 410 415
 Arg Asp Phe Val Arg Ser His Leu Gly Asn Pro Glu Leu Ser Phe Tyr
 420 425 430
 Leu Phe Ile Thr Pro Pro Lys Thr Val Leu Asp Asp His Thr Gln Thr
 435 440 445
 Leu Phe Gln Ala Asn Leu Phe Pro Ala Ala Leu Val His Leu Gly Ala
 450 455 460
 Glu Glu Pro Ala Gly Val Tyr Leu Glu Pro Gly Leu Leu Glu His Ala
 465 470 475 480
 Ile Ser Pro Ser Ala Ala Asp Val Leu Val Ala Arg Tyr Met Ser Arg
 485 490 495
 Ala Ala Gly Ser Pro Ser Pro Leu Pro Ala Pro Asp Pro Ala Pro Lys
 500 505 510
 Ser Glu Pro Ala Ala Glu Glu Gly Ala Leu Val Pro Pro Glu Pro Ile
 515 520 525
 Pro Gly Thr Ala Gln Pro Val Lys Arg Ser Leu Gly Lys Val Pro Lys
 530 535 540
 Trp Leu Lys Leu Pro Ala Ser Lys Arg
 545 550

<210> 117
 <211> 102
 <212> PRT
 <213> homo sapiens
 <400> 117

Met Ser Ala Arg Val Arg Ser Arg Ser Arg Gly Arg Gly Asp Gly Gln
 1 5 10 15
 Glu Ala Pro Asp Val Val Ala Phe Val Ala Pro Gly Glu Ser Gln Gln
 20 25 30
 Glu Glu Pro Pro Thr Asp Asn Gln Asp Ile Glu Pro Gly Gln Glu Arg
 35 40 45
 Glu Gly Thr Pro Pro Ile Glu Glu Arg Lys Val Glu Gly Asp Cys Gln
 50 55 60
 Glu Met Asp Leu Glu Lys Thr Arg Ser Glu Arg Gly Asp Gly Ser Asp
 65 70 75 80
 Val Lys Glu Lys Thr Pro Pro Asn Pro Lys His Ala Lys Thr Lys Glu
 85 90 95
 Ala Gly Asp Gly Gln Pro
 100

<210> 118
 <211> 724
 <212> PRT
 <213> homo sapiens
 <400> 118

Met Ser Phe Pro Lys Ala Pro Leu Lys Arg Phe Asn Asp Pro Ser Gly
 1 5 10 15

Cys	Ala	Pro	Ser	Pro	Gly	Ala	Tyr	Asp	Val	Lys	Thr	Leu	Glu	Val	Leu
			20					25					30		
Lys	Gly	Pro	Val	Ser	Phe	Gln	Lys	Ser	Gln	Arg	Phe	Lys	Gln	Gln	Lys
		35					40					45			
Glu	Ser	Lys	Gln	Asn	Leu	Asn	Val	Asp	Lys	Asp	Thr	Thr	Leu	Pro	Ala
	50					55					60				
Ser	Ala	Arg	Lys	Val	Lys	Ser	Ser	Glu	Ser	Lys	Glu	Ser	Gln	Lys	Asn
	65				70					75					80
Asp	Lys	Asp	Leu	Lys	Ile	Leu	Glu	Lys	Glu	Ile	Arg	Val	Leu	Leu	Gln
			85						90				95		
Glu	Arg	Gly	Ala	Gln	Asp	Ser	Arg	Ile	Gln	Asp	Leu	Glu	Thr	Glu	Leu
			100					105					110		
Glu	Lys	Met	Glu	Ala	Arg	Leu	Asn	Ala	Ala	Leu	Arg	Glu	Lys	Thr	Ser
		115					120					125			
Leu	Ser	Ala	Asn	Asn	Ala	Thr	Leu	Glu	Lys	Gln	Leu	Ile	Glu	Leu	Thr
	130					135						140			
Arg	Thr	Asn	Glu	Leu	Leu	Lys	Ser	Lys	Phe	Ser	Glu	Asn	Gly	Asn	Gln
	145				150					155					160
Lys	Asn	Leu	Arg	Ile	Leu	Ser	Leu	Glu	Leu	Met	Lys	Leu	Arg	Asn	Lys
				165					170					175	
Arg	Glu	Thr	Lys	Met	Arg	Gly	Met	Met	Ala	Lys	Gln	Glu	Gly	Met	Glu
			180					185					190		
Met	Lys	Leu	Gln	Val	Thr	Gln	Arg	Ser	Leu	Glu	Glu	Ser	Gln	Gly	Lys
		195					200					205			
Ile	Ala	Gln	Leu	Glu	Gly	Lys	Leu	Val	Ser	Ile	Glu	Lys	Glu	Lys	Ile
	210					215					220				
Asp	Glu	Lys	Ser	Glu	Thr	Glu	Lys	Leu	Leu	Glu	Tyr	Ile	Glu	Glu	Ile
	225				230					235					240
Ser	Cys	Ala	Ser	Asp	Gln	Val	Glu	Lys	Tyr	Lys	Leu	Asp	Ile	Ala	Gln
				245					250					255	
Leu	Glu	Glu	Asn	Leu	Lys	Glu	Lys	Asn	Asp	Glu	Ile	Leu	Ser	Leu	Lys
			260					265				270			
Gln	Ser	Leu	Glu	Glu	Asn	Ile	Val	Ile	Leu	Ser	Lys	Gln	Val	Glu	Asp
		275					280					285			
Leu	Asn	Val	Lys	Cys	Gln	Leu	Leu	Glu	Lys	Glu	Lys	Glu	Asp	His	Val
	290					295					300				
Asn	Arg	Asn	Arg	Glu	His	Asn	Glu	Asn	Leu	Asn	Ala	Glu	Met	Gln	Asn
	305				310					315					320
Leu	Lys	Gln	Lys	Phe	Ile	Leu	Glu	Gln	Gln	Glu	Arg	Glu	Lys	Leu	Gln
				325					330					335	
Gln	Lys	Glu	Leu	Gln	Ile	Asp	Ser	Leu	Leu	Gln	Gln	Glu	Lys	Glu	Leu
			340					345					350		
Ser	Ser	Ser	Leu	His	Gln	Lys	Leu	Cys	Ser	Phe	Gln	Glu	Glu	Met	Val
		355					360					365			
Lys	Glu	Lys	Asn	Leu	Phe	Glu	Glu	Glu	Leu	Lys	Gln	Thr	Leu	Asp	Glu
		370				375					380				
Leu	Asp	Lys	Leu	Gln	Gln	Lys	Glu	Glu	Gln	Ala	Glu	Arg	Leu	Val	Lys
	385				390					395					400
Gln	Leu	Glu	Glu	Glu	Ala	Lys	Ser	Arg	Ala	Glu	Glu	Leu	Lys	Leu	Leu
			405						410					415	
Glu	Glu	Lys	Leu	Lys	Gly	Lys	Glu	Ala	Glu	Leu	Glu	Lys	Ser	Ser	Ala
			420					425					430		
Ala	His	Thr	Gln	Ala	Thr	Leu	Leu	Leu	Gln	Glu	Lys	Tyr	Asp	Ser	Met
		435				440						445			
Val	Gln	Ser	Leu	Glu	Asp	Val	Thr	Ala	Gln	Phe	Glu	Ser	Tyr	Lys	Ala
		450				455					460				
Leu	Thr	Ala	Ser	Glu	Ile	Glu	Asp	Leu	Lys	Leu	Glu	Asn	Ser	Ser	Leu
	465				470					475					480
Gln	Glu	Lys	Ala	Ala	Lys	Ala	Gly	Lys	Asn	Ala	Glu	Asp	Val	Gln	His
				485					490					495	
Gln	Ile	Leu	Ala	Thr	Glu	Ser	Ser	Asn	Gln	Glu	Tyr	Val	Arg	Met	Leu
			500					505					510		
Leu	Asp	Leu	Gln	Thr	Lys	Ser	Ala	Leu	Lys	Glu	Thr	Glu	Ile	Lys	Glu
		515					520					525			

Ile	Thr	Val	Ser	Phe	Leu	Gln	Lys	Ile	Thr	Asp	Leu	Gln	Asn	Gln	Leu
Lys	Gln	Gln	Glu	Glu	Asp	Phe	Arg	Lys	Gln	Leu	Glu	Asp	Glu	Glu	Gly
Arg	Lys	Ala	Glu	Lys	Glu	Asn	Thr	Thr	Ala	Glu	Leu	Thr	Glu	Glu	Ile
Asn	Lys	Trp	Arg	Leu	Leu	Tyr	Glu	Glu	Leu	Tyr	Asn	Lys	Thr	Lys	Pro
Phe	Gln	Leu	Gln	Leu	Asp	Ala	Phe	Glu	Val	Glu	Lys	Gln	Ala	Leu	Leu
Asn	Glu	His	Gly	Ala	Ala	Gln	Glu	Gln	Leu	Asn	Lys	Ile	Arg	Asp	Ser
Tyr	Ala	Lys	Leu	Leu	Gly	His	Gln	Asn	Leu	Lys	Gln	Lys	Ile	Lys	His
Val	Val	Lys	Leu	Lys	Asp	Glu	Asn	Ser	Gln	Leu	Lys	Ser	Glu	Val	Ser
Lys	Leu	Arg	Cys	Gln	Leu	Ala	Lys	Lys	Lys	Gln	Ser	Glu	Thr	Lys	Leu
Gln	Glu	Glu	Leu	Asn	Lys	Val	Leu	Gly	Ile	Lys	His	Phe	Asp	Pro	Ser
Lys	Ala	Phe	His	His	Glu	Ser	Lys	Glu	Asn	Phe	Ala	Leu	Lys	Thr	Pro
Leu	Lys	Glu	Gly	Asn	Thr	Asn	Cys	Tyr	Arg	Ala	Pro	Met	Glu	Cys	Gln
Glu	Ser	Trp	Lys												

<210> 119
 <211> 325
 <212> PRT
 <213> homo sapiens
 <400> 119

Met	Thr	Glu	Arg	Arg	Arg	Asp	Glu	Leu	Ser	Glu	Glu	Ile	Asn	Asn	Leu
Arg	Glu	Lys	Val	Met	Lys	Gln	Ser	Glu	Glu	Asn	Asn	Asn	Leu	Gln	Ser
Gln	Val	Gln	Lys	Leu	Thr	Glu	Glu	Asn	Thr	Thr	Leu	Arg	Glu	Gln	Val
Glu	Pro	Thr	Pro	Glu	Asp	Glu	Asp	Asp	Asp	Ile	Glu	Leu	Arg	Gly	Ala
Ala	Ala	Ala	Ala	Ala	Pro	Pro	Pro	Pro	Ile	Glu	Glu	Glu	Cys	Pro	Glu
Asp	Leu	Pro	Glu	Lys	Phe	Asp	Gly	Asn	Pro	Asp	Met	Leu	Ala	Pro	Phe
Met	Ala	Gln	Cys	Gln	Ile	Phe	Met	Glu	Lys	Ser	Thr	Arg	Asp	Phe	Ser
Val	Asp	Arg	Val	Arg	Val	Cys	Phe	Val	Thr	Ser	Met	Met	Thr	Gly	Arg
Ala	Ala	Arg	Trp	Ala	Ser	Ala	Lys	Leu	Glu	Arg	Ser	His	Tyr	Leu	Met
His	Asn	Tyr	Pro	Ala	Phe	Met	Met	Glu	Met	Lys	His	Val	Phe	Glu	Asp
Pro	Gln	Arg	Arg	Glu	Val	Ala	Lys	Arg	Lys	Ile	Arg	Arg	Leu	Arg	Gln
Gly	Met	Gly	Ser	Val	Ile	Asp	Tyr	Ser	Asn	Ala	Phe	Gln	Met	Ile	Ala
Gln	Asp	Leu	Asp	Trp	Asn	Glu	Pro	Ala	Leu	Ile	Asp	Gln	Tyr	His	Glu
Gly	Leu	Ser	Asp	His	Ile	Gln	Glu	Glu	Leu	Ser	His	Leu	Glu	Val	Ala
Lys	Ser	Leu	Ser	Ala	Leu	Ile	Gly	Gln	Cys	Ile	His	Ile	Glu	Arg	Arg
Leu	Ala	Arg	Ala	Ala	Ala	Ala	Arg	Lys	Pro	Arg	Ser	Pro	Pro	Arg	Ala
Leu	Val	Leu	Pro	His	Ile	Ala	Ser	His	His	Gln	Val	Asp	Pro	Thr	Glu

260 265 270
 Pro Val Gly Gly Ala Arg Met Arg Leu Thr Gln Glu Glu Lys Glu Arg
 275 280 285
 Arg Arg Lys Leu Asn Leu Cys Leu Tyr Cys Gly Thr Gly Gly His Tyr
 290 295 300
 Ala Asp Asn Cys Pro Ala Lys Ala Ser Lys Ser Ser Pro Ala Gly Asn
 305 310 315 320
 Ser Pro Ala Pro Leu
 325

<210> 120
 <211> 162
 <212> PRT
 <213> homo sapiens
 <400> 120

Met Asp Ile Pro Gln Thr Lys Gln Asp Leu Glu Leu Pro Lys Leu Ala
 1 5 10 15
 Gly Thr Trp His Ser Met Ala Met Ala Thr Asn Asn Ile Ser Leu Met
 20 25 30
 Ala Thr Leu Lys Ala Pro Leu Arg Val His Ile Thr Ser Leu Leu Pro
 35 40 45
 Thr Pro Glu Asp Asn Leu Glu Ile Val Leu His Arg Trp Glu Asn Asn
 50 55 60
 Ser Cys Val Glu Lys Lys Val Leu Gly Glu Lys Thr Gly Asn Pro Lys
 65 70 75 80
 Lys Phe Lys Ile Asn Tyr Thr Val Ala Asn Glu Ala Thr Leu Leu Asp
 85 90 95
 Thr Asp Tyr Asp Asn Phe Leu Phe Leu Cys Leu Gln Asp Thr Thr Thr
 100 105 110
 Pro Ile Gln Ser Met Met Cys Gln Tyr Leu Ala Arg Val Leu Val Glu
 115 120 125
 Asp Asp Glu Ile Met Gln Gly Phe Ile Arg Ala Phe Arg Pro Leu Pro
 130 135 140
 Arg His Leu Trp Tyr Leu Leu Asp Leu Lys Gln Met Glu Glu Pro Cys
 145 150 155 160
 Arg Phe

<210> 121
 <211> 55
 <212> PRT
 <213> homo sapiens
 <400> 121

Met Ala Lys Asp Thr Ala Ser Leu Phe Ile Pro Leu Cys Gly Cys Ser
 1 5 10 15
 Asn Ser Lys Ser Gly Thr Thr Gly Gln Met Asn Val Gly Thr Cys Arg
 20 25 30
 Tyr Gly Ser Leu Ala Leu Arg Gln Leu Val Trp Gly Leu Pro Pro Gly
 35 40 45
 Ala Ser Trp Pro His Leu Arg
 50 55

<210> 122
 <211> 384
 <212> PRT
 <213> homo sapiens
 <400> 122

Met Glu Gly Leu Gly Arg Ser Cys Leu Trp Leu Arg Arg Glu Leu Ser
 1 5 10 15
 Pro Pro Arg Pro Arg Leu Leu Leu Leu Asp Cys Arg Ser Arg Glu Leu
 20 25 30
 Tyr Glu Ser Ala Arg Ile Gly Gly Ala Leu Ser Val Ala Leu Pro Ala
 35 40 45
 Leu Leu Leu Arg Arg Leu Arg Gly Ser Leu Ser Val Arg Ala Leu
 50 55 60
 Leu Pro Gly Pro Pro Leu Gln Pro Pro Pro Pro Ala Pro Val Leu Leu
 65 70 75 80

Tyr Asp Gln Gly Gly Gly Arg Arg Arg Arg Gly Glu Ala Glu Ala Glu
 Ala Glu Glu Trp 85 Glu Ala Glu Ser Val 90 Leu Gly Thr Leu 95 Gln Lys
 Leu Arg Glu 100 Gly Tyr Leu Ala Tyr Tyr Leu Gln Gly Gly Phe Ser
 Arg Phe 115 Gln Ala Glu Cys Pro His Leu Cys Glu Thr Ser Leu Ala Gly
 Arg 130 Ala Gly Ser Ser Met 135 Ala Pro Val Pro Gly 140 Pro Val Pro Val Val
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aaccaccgga	tccagctggt	tgggcctgat	ggtgtcttcc	taaacaagta	tggcttcgag	2700
ggggctctct	ggaagcactt	tgactcccca	cggggtgtgg	ccttcaacca	tgagggccac	2760
ttgggtgtca	ctgacttcaa	caaccaccgg	ctcctgggtta	ttcaccccga	ctgccagtcg	2820
gcacgctttc	tgggctcggg	gggcacaggc	aatgggcagt	tcctgcgccc	acaaggggta	2880
gctgtggacc	aggaagggcg	catcattgtg	gcggattcca	ggaaccatcg	ggtacagatg	2940
tttgaatcca	acggcagctt	cctgtgcaag	tttgggtgctc	aaggcagcgg	ctttgggcag	3000
atggaccgcc	cttccggcat	cgccatcacc	cccgcaggaa	tgatcgttgt	ggtggacttt	3060
ggcaacaatc	gaatcctcgt	cttctaa				3087

<210> 264

<211> 209

<212> PRT

<213> Homo sapiens

<400> 264

Met	Gly	Ser	Val	Ser	Asn	Gln	Gln	Phe	Ala	Gly	Gly	Cys	Ala	Lys	Ala
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Ala	Glu	Glu	Ala	Pro	Glu	Glu	Ala	Pro	Glu	Asp	Ala	Ala	Arg	Ala	Ala
			20					25					30		
Asp	Glu	Pro	Gln	Leu	Leu	His	Gly	Ala	Gly	Ile	Cys	Lys	Trp	Phe	Asn
		35					40					45			
Val	Arg	Met	Gly	Phe	Gly	Phe	Leu	Ser	Met	Thr	Ala	Arg	Ala	Gly	Val
	50					55					60				
Ala	Leu	Asp	Pro	Pro	Val	Asp	Val	Phe	Val	His	Gln	Ser	Lys	Leu	His
65					70				75					80	
Met	Glu	Gly	Phe	Arg	Ser	Leu	Lys	Glu	Gly	Glu	Ala	Val	Glu	Phe	Thr
			85						90					95	
Phe	Lys	Lys	Ser	Ala	Lys	Gly	Leu	Glu	Ser	Ile	Arg	Val	Thr	Gly	Pro
			100					105					110		
Gly	Gly	Val	Phe	Cys	Ile	Gly	Ser	Glu	Arg	Arg	Pro	Lys	Gly	Lys	Ser
		115					120					125			
Met	Gln	Lys	Arg	Arg	Ser	Lys	Gly	Asp	Arg	Cys	Tyr	Asn	Cys	Gly	Gly
	130					135					140				
Leu	Asp	His	His	Ala	Lys	Glu	Cys	Lys	Leu	Pro	Pro	Gln	Pro	Lys	Lys
145					150					155				160	
Cys	His	Phe	Cys	Gln	Ser	Ile	Ser	His	Met	Val	Ala	Ser	Cys	Pro	Leu
			165						170					175	
Lys	Ala	Gln	Gln	Gly	Pro	Ser	Ala	Gln	Gly	Lys	Pro	Thr	Tyr	Phe	Arg
		180						185					190		
Glu	Glu	Glu	Glu	Glu	Ile	His	Ser	Pro	Thr	Leu	Leu	Pro	Glu	Ala	Gln
		195					200					205			

Asn

<210> 265

<211> 227

<212> PRT

<213> Caenorhabditis elegans

<400> 265

Met	Ser	Thr	Val	Val	Ser	Glu	Gly	Arg	Asn	Asp	Gly	Asn	Asn	Arg	Tyr
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Ser	Pro	Gln	Asp	Glu	Val	Glu	Asp	Arg	Leu	Pro	Asp	Val	Val	Asp	Asn
			20					25					30		
Arg	Leu	Thr	Glu	Asn	Met	Arg	Val	Pro	Ser	Phe	Glu	Arg	Leu	Pro	Ser
		35					40					45			
Pro	Thr	Pro	Arg	Tyr	Phe	Gly	Ser	Cys	Lys	Trp	Phe	Asn	Val	Ser	Lys
	50					55					60				
Gly	Tyr	Gly	Phe	Val	Ile	Asp	Asp	Ile	Thr	Gly	Glu	Asp	Leu	Phe	Val
65					70					75				80	
His	Gln	Ser	Asn	Leu	Asn	Met	Gln	Gly	Phe	Arg	Ser	Leu	Asp	Glu	Gly
			85						90					95	
Glu	Arg	Val	Ser	Tyr	Tyr	Ile	Gln	Glu	Arg	Ser	Asn	Gly	Lys	Gly	Arg
		100						105					110		
Glu	Ala	Tyr	Ala	Val	Ser	Gly	Glu	Val	Glu	Gly	Gln	Gly	Leu	Lys	Gly
		115					120					125			

Ser Arg Ile His Pro Leu Gly Arg Lys Lys Ala Val Ser Leu Arg Cys
 130 135 140
 Phe Arg Cys Gly Lys Phe Ala Thr His Lys Ala Lys Ser Cys Pro Asn
 145 150 155 160
 Val Lys Thr Asp Ala Lys Val Cys Tyr Thr Cys Gly Ser Glu Glu His
 165 170 175
 Val Ser Ser Ile Cys Pro Glu Arg Arg Arg Lys His Arg Pro Glu Gln
 180 185 190
 Val Ala Ala Glu Glu Ala Glu Ala Arg Met Ala Ala Glu Lys Ser
 195 200 205
 Ser Pro Thr Thr Ser Asp Asp Asp Ile Arg Glu Lys Asn Ser Asn Ser
 210 215 220
 Ser Asp Glu
 225

<210> 266
 <211> 195
 <212> PRT
 <213> *Xenopus laevis*
 <400> 266

Met Gly Ser Val Ser Asn Gln Glu Ile Thr Glu Gly Leu Pro Lys Ser
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 Leu Asp Gly Thr Ala Asp Ile His Lys Ser Asp Lys Ser Val Ile Phe
 20 25 30
 Gln Gly Ser Gly Val Cys Lys Trp Phe Asn Val Arg Met Gly Phe Gly
 35 40 45
 Phe Leu Thr Met Thr Lys Lys Glu Gly Thr Asp Leu Glu Thr Pro Leu
 50 55 60
 Asp Val Phe Val His Gln Ser Lys Leu His Met Glu Gly Phe Arg Ser
 65 70 75 80
 Leu Lys Glu Gly Glu Ser Val Glu Phe Thr Phe Lys Lys Ser Ser Lys
 85 90 95
 Gly Leu Glu Ser Thr Gln Val Thr Gly Pro Gly Gly Ala Pro Cys Ile
 100 105 110
 Gly Ser Glu Arg Arg Pro Lys Val Lys Gly Gln Gln Lys Arg Arg Gln
 115 120 125
 Arg Gly Asp Arg Cys Tyr Asn Cys Gly Gly Leu Asp His His Ala Lys
 130 135 140
 Glu Cys Lys Leu Pro Pro Gln Pro Lys Lys Cys His Phe Cys Gln Asn
 145 150 155 160
 Pro Asn His Met Val Ala Gln Cys Pro Glu Lys Ala Met Gln Ala Ala
 165 170 175
 Asn Leu Glu Asp Gln Pro Ile Thr Glu Glu Gln Glu Leu Ile Pro Glu
 180 185 190
 Ile Met Glu
 195

<210> 267
 <211> 195
 <212> PRT
 <213> *Drosophila melanogaster*
 <400> 267

Met Glu Asn Val Gln Leu Glu Asn Gly Leu Glu Arg Arg Thr Thr Ser
 1 5 10 15
 Gln Ser Ser Thr Ser Ser Ala Asn Pro Ala Asn Leu Ala Ser Pro Thr
 20 25 30
 Glu Glu Cys Gly Cys Val Arg Leu Gly Lys Cys Lys Trp Phe Asn Val
 35 40 45
 Ala Lys Gly Trp Gly Phe Leu Thr Pro Asn Asp Gly Gly Gln Glu Val
 50 55 60
 Phe Val His Gln Ser Val Ile Gln Met Ser Gly Phe Arg Ser Leu Gly
 65 70 75 80
 Glu Gln Glu Glu Val Glu Phe Glu Cys Gln Arg Thr Ser Arg Gly Leu
 85 90 95
 Glu Ala Thr Arg Val Ser Ser Arg His Gly Gly Ser Cys Gln Gly Ser
 100 105 110

Thr Tyr Arg Pro Arg Ile Asn Arg Arg Thr Arg Arg Met Arg Cys Tyr
 115 120 125
 Asn Cys Gly Glu Phe Ala Asn His Ile Ala Ser Glu Cys Ala Leu Gly
 130 140
 Pro Gln Pro Lys Arg Cys His Arg Cys Arg Gly Glu Asp His Leu His
 145 150 155 160
 Ala Asp Cys Pro His Lys Asn Val Thr Gln Ser His Ser Asn Ser Lys
 165 170 175
 Ser Ile Ser Asn Asn Ser Ser Ser Ser Ala Ala Gln Glu Lys Ser Glu
 180 185 190

Glu Ala Thr
 195

<210> 268

<211> 209

<212> PRT

<213> Mus musculus

<400> 268

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 20 25 30
 Asp Glu Pro Gln Leu Leu His Gly Ala Gly Ile Cys Lys Trp Phe Asn
 35 40 45
 Val Arg Met Gly Phe Gly Phe Leu Ser Met Thr Ala Arg Ala Gly Val
 50 55 60
 Ala Leu Asp Pro Pro Val Asp Val Phe Val His Gln Ser Lys Leu His
 65 70 75 80
 Met Glu Gly Phe Arg Ser Leu Lys Glu Gly Glu Ala Val Glu Phe Thr
 85 90 95
 Phe Lys Lys Ser Ala Lys Gly Leu Glu Ser Ile Arg Val Thr Gly Pro
 100 105 110
 Gly Gly Val Phe Cys Ile Gly Ser Glu Arg Arg Pro Lys Gly Lys Asn
 115 120 125
 Met Gln Lys Arg Arg Ser Lys Gly Asp Arg Cys Tyr Asn Cys Gly Gly
 130 135 140
 Leu Asp His His Ala Lys Glu Cys Lys Leu Pro Pro Gln Pro Lys Lys
 145 150 155 160
 Cys His Phe Cys Gln Ser Ile Asn His Met Val Ala Ser Cys Pro Leu
 165 170 175
 Lys Ala Gln Gln Gly Pro Ser Ser Gln Gly Lys Pro Ala Tyr Phe Arg
 180 185 190
 Glu Glu Glu Glu Glu Ile His Ser Pro Ala Leu Leu Pro Glu Ala Gln
 195 200 205
 Asn

<210> 269

<211> 30

<212> DNA

<213> homo sapiens

<400> 269

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30

<210> 270

<211> 30

<212> DNA

<213> homo sapiens

<400> 270

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30

<210> 271

<211> 21

<212> DNA

<213> homo sapiens

<400> 271

ttcgaacgcc agcacatgga c

21

<210> 272


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<211> 21
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<212> DNA
<213> homo sapiens
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cgcgcgcctt ctccgccagg cccggcgggc gggagcgggg gcgagggagc aggagcggcc 180
agtgcctccg acacccccgg cccggcaccc ccggcccgcc atcccccgcc gccgcccggc 240
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gcgcccgggt cagcagccgc ctctccccc gcggaccgag gcggcgccgg cggccggaca 420
gcccgtggag agcttccccg tggacttcac ggccgtggag ggtaacatgg acagcttcat 480
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gagctcccgg gactggccgc gactcgcac aggcacaggg atcctgtcct cacagccgga 780
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ccccctcaag ggtgccccg tccacctggt ggacagctgc ccctggcccc actgcaaccc 1620
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gagggggcca gacaccgct gcccagtg caccctaccc cccaccagca ggccctccc 1860
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cccggctttc cctgcccctc tcccacagcc cagccagaga caagggacct gctgtcatcc 1980
ccatctgtgg cctgggggtc cttcctgaca acgagggggt agccagaaga gaagcactgg 2040
attcctcagt ccaccagctc agacagcacc caccggcccc acccatcaag cccttttata 2100
ttattttata aagtgacttt ttattactt taatttttta aaaaaaggaa aataagaata 2160
tatgatgaat gatattgttt tgtaactttt taaaaatgat tttaaagaga caaaaaagaa 2220
aaaaaaaaaa aaa 2233

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<210> 274
<211> 496
<212> PRT
<213> homo sapiens
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Ala Gly Gly Ser Glu Gly Arg Lys Thr Trp Arg Arg Arg Gly Gln Gln
20 25 30
Pro Pro Pro Pro Pro Arg Thr Glu Ala Ala Pro Ala Ala Gly Gln Pro
35 40 45
Val Glu Ser Phe Pro Leu Asp Phe Thr Ala Val Glu Gly Asn Met Asp
50 55 60
Ser Phe Met Ala Gln Val Lys Ser Leu Ala Gln Ser Leu Tyr Pro Cys

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65	Ser	Ala	Gln	Gln	Leu	Asn	Glu	Asp	Leu	Arg	Leu	His	Leu	Leu	Leu	Asn
	Thr	Ser	Val	Thr	85	Asn	Asp	Gly	Ser	90	Pro	Ala	Gly	Tyr	Tyr	95
	Glu	Ser	Arg	Gly	100	Ser	Arg	Arg	Trp	105	Leu	Leu	Phe	Leu	Glu	110
	Tyr	Cys	Phe	Asn	115	Arg	Glu	Asn	Cys	120	Asp	Ser	Arg	Tyr	Asp	125
	Arg	Leu	Met	Ser	130	Ser	Arg	Asp	Trp	135	Pro	Arg	Thr	Arg	Thr	140
	Ile	Leu	Ser	Ser	145	Gln	Pro	Glu	Glu	150	Asn	Pro	Tyr	Trp	Trp	155
	Met	Val	Phe	Ile	165	Pro	Tyr	Cys	Ser	170	Ser	Asp	Val	Trp	Ser	175
	Ser	Lys	Ser	Glu	180	Lys	Asn	Glu	Tyr	185	Ala	Phe	Met	Gly	Ala	190
	Gln	Glu	Val	Val	195	Arg	Glu	Leu	Leu	200	Gly	Arg	Gly	Leu	Ser	205
	Val	Leu	Leu	Leu	210	Ala	Gly	Ser	Ser	215	Ala	Gly	Gly	Thr	Gly	220
	Asn	Val	Asp	Arg	225	Val	Ala	Glu	Gln	230	Leu	Glu	Lys	Leu	Gly	235
	Ile	Gln	Val	Arg	245	Gly	Leu	Ala	Asp	250	Ser	Gly	Trp	Phe	Leu	255
	Gln	Tyr	Arg	His	260	Thr	Asp	Cys	Val	265	Asp	Thr	Ile	Thr	Cys	270
	Glu	Ala	Ile	Arg	275	Arg	Gly	Ile	Arg	280	Tyr	Trp	Asn	Gly	Val	285
	Arg	Cys	Arg	Arg	290	Gln	Phe	Gln	Glu	295	Gly	Glu	Glu	Trp	Asn	300
	Gly	Tyr	Lys	Val	305	Tyr	Pro	Thr	Leu	310	Arg	Cys	Pro	Val	Phe	315
	Trp	Leu	Phe	Asp	325	Glu	Ala	Gln	Leu	330	Thr	Val	Asp	Asn	Val	335
	Gly	Gln	Pro	Val	340	Gln	Glu	Gly	Leu	345	Arg	Leu	Tyr	Ile	Gln	350
	Arg	Glu	Leu	Arg	355	His	Thr	Leu	Lys	360	Asp	Val	Pro	Ala	Ser	365
	Ala	Cys	Leu	Ser	370	His	Glu	Ile	Ile	375	Ile	Arg	Ser	His	Trp	380
	Gln	Val	Lys	Gly	385	Thr	Ser	Leu	Pro	390	Arg	Ala	Leu	His	Cys	395
	Ser	Leu	His	Asp	405	Ser	His	Lys	Ala	410	Ser	Lys	Thr	Pro	Leu	415
	Pro	Val	His	Leu	420	Val	Asp	Ser	Cys	425	Pro	Trp	Pro	His	Cys	430
	Cys	Pro	Thr	Val	435	Arg	Asp	Gln	Phe	440	Thr	Gly	Gln	Glu	Met	445
	Gln	Phe	Leu	Met	450	His	Met	Gly	Phe	455	Asp	Met	Gln	Thr	Val	460
	Gln	Gly	Leu	Glu	465	Pro	Ser	Glu	Leu	470	Leu	Gly	Met	Leu	Ser	475
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ctcgaggctt ccgttgctca gcatccccag 30
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 <211> 402
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 20 25 30
 Ser Pro Gln Asp Asp Ala Ser Ser Pro His Leu Gln Val Met Leu Gln
 35 40 45
 Ile His Leu Pro Gly Arg His Thr Leu Phe Val Arg Ala Met Ile Asp
 50 55 60
 Ser Gly Ala Ser Gly Asn Phe Ile Asp His Glu Tyr Val Ala Gln Asn
 65 70 75 80
 Gly Ile Pro Leu Arg Ile Lys Asp Trp Pro Ile Leu Val Glu Ala Ile
 85 90 95
 Asp Gly Arg Pro Ile Ala Ser Gly Pro Val Val His Glu Thr His Asp
 100 105 110
 Leu Ile Val Asp Leu Gly Asp His Arg Glu Val Leu Ser Phe Asp Val
 115 120 125
 Thr Gln Ser Pro Phe Phe Pro Val Val Leu Gly Val Arg Trp Leu Ser
 130 135 140
 Thr His Asp Pro Asn Ile Thr Trp Ser Thr Arg Ser Ile Val Phe Asp
 145 150 155 160
 Ser Glu Tyr Cys Arg Tyr His Cys Arg Met Tyr Ser Pro Ile Pro Pro

Ser	Leu	Pro	Pro	165	Pro	Ala	Pro	Gln	Pro	170	Pro	Leu	Tyr	Tyr	Pro	175	Val	Asp
Gly	Tyr	Arg	180	Val	Tyr	Gln	Pro	Val	185	Arg	Tyr	Tyr	Tyr	Val	190	Gln	Asn	Val
Tyr	Thr	Pro	195	Val	Asp	Glu	His	Val	200	Tyr	Pro	Asp	His	Arg	Leu	Val	Asp	
Pro	His	Ile	Glu	Met	Ile	Pro	Gly	Ala	His	Ser	Ile	Pro	Ser	Gly	His	240		
225	Val	Tyr	Ser	Leu	Ser	Glu	Pro	Glu	Met	Ala	Ala	Leu	Arg	Asp	Phe	Val		
Val	Tyr	Ser	Leu	Ser	Glu	Pro	Glu	Met	Ala	Ala	Leu	Arg	Asp	Phe	Val			
Ala	Arg	Asn	Val	Lys	Asp	Gly	Leu	Ile	Thr	Pro	Thr	Ile	Ala	Pro	Asn			
Gly	Ala	Gln	Val	Leu	Gln	Val	Lys	Arg	Gly	Trp	Lys	Leu	Gln	Val	Ser			
Tyr	Asp	Cys	Arg	Ala	Pro	Asn	Asn	Phe	Thr	Ile	Gln	Asn	Gln	Tyr	Pro			
290	Arg	Leu	Ser	Ile	Pro	Asn	Leu	Glu	Asp	Gln	Ala	His	Leu	Ala	Thr	Tyr		
305	Thr	Glu	Phe	Val	Pro	Gln	Ile	Pro	Gly	Tyr	Gln	Thr	Tyr	Pro	Thr	Tyr		
Thr	Glu	Phe	Val	Pro	Gln	Ile	Pro	Gly	Tyr	Gln	Thr	Tyr	Pro	Thr	Tyr			
Ala	Ala	Tyr	Pro	Thr	Tyr	Pro	Val	Gly	Phe	Ala	Trp	Tyr	Pro	Val	Gly			
Arg	Asp	Gly	Gln	Gly	Arg	Ser	Leu	Tyr	Val	Pro	Val	Met	Ile	Thr	Trp			
Arg	Asp	Gly	Gln	Gly	Arg	Ser	Leu	Tyr	Val	Pro	Val	Met	Ile	Thr	Trp			
Asn	Pro	His	Trp	Tyr	Arg	Gln	Pro	Pro	Val	Pro	Gln	Tyr	Pro	Pro	Pro			
370	Gln	Pro	Pro	Pro	Pro	Pro	Pro	Pro	Pro	Pro	Pro	Pro	Ser	Tyr	Ser			
385	Thr	Leu																

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<210>	286																	
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<212>	DNA																	
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ggatccatct	tccgggcaga	cacaccct																28
<210>	287																	
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ctcgagtgcc	atttcaggtt	cggacagtg																29
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<212>	DNA																	
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gaattcatgg	agggtctggg	ccgctc																26
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<212>	DNA																	

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<213> homo sapiens
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<210> 290
<211> 16
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1 5 10 15
<210> 291
<211> 30
<212> DNA
<213> homo sapiens
<400> 291
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<210> 292
<211> 29
<212> DNA
<213> homo sapiens
<400> 292
cgctcgagac actcttttcg ggtttggtc

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25

30

29